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L65: Entry 1 of 3 File: USPT May 31, 1983

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DOCUMENT-IDENTIFIER: US 4386104 A

TITLE: Process for the treatment of acne

DATE-ISSUED: May 31, 1983

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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PARENT-CASE:
This application is a division of my application Ser. No. 965,584, filed Dec. 1, 1978 now U.S. Pat. No. 4,292,326, which is a continuation-in-part of my application Ser. No. 895,565, filed Apr. 12, 1978, now abandoned.

FOREIGN-APPL-PRIORITY-DATA:

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IT	22617 A/77	April 19, 1977
IT	31471 A/77	December 30, 1977

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US-CL-ISSUED: 424/317
US-CL-CURRENT: 514/558

FIELD-OF-SEARCH: 424/317

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	3920835	November 1975	Van Scott et al.	424/311

OTHER PUBLICATIONS

Chemical Abstracts, 54:16659c, (1960).
Chemical Abstracts, 66:1860r, (1967).

ART-UNIT: 125

PRIMARY-EXAMINER: Schenkman; Leonard

ATTY-AGENT-FIRM: Roylance, Abrams, Berdo & Farley

ABSTRACT:

There is disclosed a composition for the treatment of acne, hyperpigmentary dermatoses or skin hyperpigmentation which contains dicarboxylic acids containing 7 to 13 carbon atoms or certain derivatives thereof that contain reducing functional group or a salt thereof. There are also disclosed methods for preparing mercapto derivatives of these dicarboxylic acids.

6 Claims, 0 Drawing figures
Exemplary Claim Number: 1

BRIEF SUMMARY:

This invention relates to compositions for the treatment of acne, hyperpigmentary dermatoses and the like.

Acne is a widespread skin ailment which comprises an abnormal condition affecting chiefly the skin of the face (but also that of the shoulders and chest), characterized by the development of pimples, blackheads, and pustules, and caused by an infection and inflammation of the wax-producing (sebaceous) glands. The most common form is known as acne vularis and occurs chiefly in young people between the ages of 12 or 13 and 20. It is believd that the initiating cause of acne is a temporary abnormality in the activity of certain glands, especially the sex glands (which in the early teen years become highly functional and sometimes unstable) and the glands concerned with growth. Emotional upheavals, which upset the glandular balance and normal function, also result in an outbreak of acne.

Dermatoses, such as skin hyperpigmentations (which frequently produce a disfiguring effect, such as in the case of chloasma of the face), constitute a problem not only of an esthetic but also of a therapeutic nature, for which as yet no basic solution has been found. Only hydroquinone and its derivatives have up to now shown some effectiveness, in vivo, for the treatment of skin hyperpigmentations. However, they cause as a side effect, the development of long-lasting hypopigmented zones, which are at times irreducible.

An object of the present invention is to provide compositions which are useful in the treatment of acne.

The compositions encompassed in the present invention are characterized by the fact that they contain as active ingredients a dicarboxylic acid having from 7 to 13 carbon atoms or a derivative thereof containing at least one reducing group in the molecule or a salt thereof. These compositions which can be applied topically in the form of creams, ointments, unguents, and lotions, are characterized therefore by the fact that they contain a dicarboxylic acid preferably selected from the group consisting of pimelic, suberic, azelaic, sebacic, 1,9-nonanedicarboxlic, 1, 10-decanedicarboxylic, and 1, 11-undecanedicarboxylic acids or derivatives of such acids containing a reducing functional group, preferably a mercapto derivative or a salt thereof. The compositions of the present invention have been found in particular capable of inhibiting the formation of the skin pigment (melanin) by blocking the dopa-tyrosinase reaction by a competitive type mechanism. The compositions have also been found to be useful in the treatment of acne.

Without desiring to establish any limitations for the scope of the present invention and without trying to give a binding explanation of the mechanism of action of the active component of the compositions of the present invention in the treatment of dermatoses, it seems plausible to seek the cause of their activity in a mechanism similar to that encountered in the experimental studies carried out by the applicant on the behavior of a fungus, Pityrosporum orbiculare, which is the cause of a dermatosis which manifests itself by the appearance of achromic or whitish flecks or spots (PItyriasi versicolor). From observations carried out in vitro and in vivo of the behavior of this fungus it is reasonable to believe that, by metabolizing the fatty acids normally present on the skin and necessary for their survival and diffusion, this fungus causes

the formation of the said dicarboxylic acids, which are specifically responsible for the subsequent effect of inhibiting melano-genesis.

In this respect, it should be noted that from an examination of cultures of Pityrosporum orbiculare, to which technical oleic acid was added as lipid supplement after saponification there was also found the presence of pimelic, azelaic, and 1,9-non-andicarboxylic (C.sub.11) acids, identified by gas chromatography and mass spectrometry. The C.sub.9 and C.sub.11 members of the series of dicarboxylic acids have shown, in vitro, a substantial anti-tyrosinase activity, which has furthermore been encountered also in the members having 8, 10, 12 and 13 carbon atoms.

From a study of the mechanism of action of the above indicated acids it has furthermore been possible to formulate and synthesize derivatives having a better action in inhibiting the dopa-tyrosinase reaction, the main ones of which are the mercapto derivatives. Therefore, another feature of the present invention concerns the derivatives of dicarboxylic acids or their salts having from 7 to 13 carbon atoms in their molecule and characterized by the fact that they contain at least one reducing group, preferably a mercapto group.

The dicarboxylic acids, their derivatives or salts described above may be applied in a variety of pharmaceutically acceptable vehicles which would depend on the mode of treatment. Thus, for example, they may be used in the form of an injectable suspension of the active material in saline solution. On the other hand, if they are intended for topical application, they may be applied in creams. Moreover, they may be given in orally administerable form. The quantity of active ingredient that will be contained in these compositions may vary somewhat. All that is required is that the dicarboxylic acids or their derivatives or salts thereof be present in therapeutically effective amounts. The quantity of dicarboxylic acid or its derivatives or salts thereof that will be contained in the composition of this invention will vary depending upon the dosage form and/or the condition treated. Thus, for example, when given orally they may comprise all or substantially all of the dosage forms. On the other hand, when contained in a dosage form suitable for subcutaneous injection they may comprise between about 20% to 30% by weight, and preferably about 25% by weight based on the total weight of the composition. In case the composition takes the form of a cream or lotion suitable for topical application, the dicarboxylic acid or its derivatives or salts thereof may constitute between about 10% to 20% by weight and preferably about 15% by weight based on the total weight of the composition.

It has also been found to be advantageous to include a keratolytic agent in the compositions of this invention. This is particularly the case when the compositions are intended to be applied to the skin. By way of example of the keratolytic agents that may be employed herein, mention may be made of salicylic acid, vitamin A acid, resorcinol, phenol, cresol, etc. The quantity of keratolytic agent that can advantageously be employed herein also varies. Ordinarily, this will constitute from about 2% to about 4% by weight based on the total weight of the composition.

DETAILED DESCRIPTION:

The following examples are given to further illustrate the present invention without constituting any undue limitation thereon.

EXAMPLE 1

(a) Preparation of the Alpha-Monobromo Derivative:

1 mole of dicarboxylic acid (for instance, azelaic acid) is introduced into a 3 liter flask placed on a magnetic agitator provided with a heating plate, and 500 g of phosphorous pentachloride are added. After the reaction has taken place (complete melting), 60 ml of anhydrous bromine are added in small portions in the course of about 6 hours, with continuous agitation. The

reaction temperature is maintained at 60.degree. to 70.degree. C.

After the reaction is complete, it is cooled and thereupon about 500 ml of distilled water are cautiously added; it is then warmed on the magnetic agitator for about 30 minutes and cooled.

The low organic phase, formed of an oily liquid of dark yellow color, constitutes the crude monobromo derivative which is distilled under vacuum.

(b) Preparation of the Mercapto Derivative:

1 mole of alpha-monobromo derivative is introduced, under a hood, into a 2 liter flask provided with condenser thereupon 50 ml of ethyl alcohol are added at 95.degree. C. and 1.1 mole of thiourea. The mixture is brought to a boil for 6 hours, whereupon the alkyl thiouronium salt is separated out by cooling.

For the saponification of this salt, 500 ml of 5 N NaOH are added to the mixture and it is boiled under reflux for an additional two hours. The reaction mixture, after being cooled, is acidified with 5 N HCl and, after agitation for about 10 minutes, an oily layer forms, which is removed. The aqueous layer is extracted 3 times with ethyl ether, and this ether extract is added to the oily layer which was previously removed, which was then dried over anhydrous Na.sub.2 SO.sub.4. After removal of the ether by distillation, the crude mercapto derivative is purified in a column containing silica gel.

For the preparation of dimercapto derivatives, the procedure of the preceding example is repeated with the following differences:

1. The dibromo derivative of the dicarboxylic acid is prepared in the same manner as the monobromo derivative, but doubling the amount of bromine added and tripling the reaction times; the reaction temperature is maintained at 90.degree. to 100.degree. C.

2. During the phase of preparation of the mercapto derivative, twice the quantities of alcohol, thiourea, and soda respectively are used for each mole of dibromide.

In order to evaluate the activity of the compositions in accordance with the present invention, and therefore of the respective active ingredients, pharmacological studies were carried out as well as tests in vivo.

From the combined lipid extracts (cellular and from the filtrate) of cultures of Pityrosporum orbiculare (strain 4709) grown for 20-30 days on a conventional synthetic medium to which oleic acid was added, there was obtained a saponifiable portion having substantial activity in inhibiting tyrosinase. Subjecting this portion to thin layer chromatography (TLC), a fraction was isolated, of Rf=0.13, capable of inhibiting the dopa-tyrosinase reaction.

Analysis by gas chromatography and subsequent analyses by mass spectrometry have shown the presence in this fraction of a series of C.sub.5 -C.sub.9 dicarboxylic acids with a quantitative predominance of pimelic and azelaic acids.

From a comparative test using samples of pure acids, it has been possible to exclude any tyrosinase inhibiting activity on the part of glutaric acid (C.sub.5) while such activity becomes evident starting with the C.sub.7 member, and is a maximum for the C.sub.9 and C.sub.11 members.

In particular, enzymatic kinetics tests have shown that azelaic acid is a competitive inhibitor of tyrosinase with a Ki=4.10.sup.-4 M.

EXAMPLE 2

The in vivo applications of the compositions of the present invention are illustrated by the following experiments:

A cream having a base of azelaic acid (see Examples 3-5 below) was applied for 30 days to the dark spots on the following patients:

(a) 20 patients suffering from chloasma

(b) 3 patients suffering from poikiloderma of Civatte

All the patients, at the end of the treatment, showed a clear lightening of the hyperpigmented zones, and in most cases, there was obtained an apparently complete cure without collateral effects. After five months of observation, none of the patients treated showed any traces of leukoderma. The general condition of the skin was improved especially in those patients affected with acne.

Examples 3-5 below are exemplary of cream compositions that are used in the procedure described in Example 2 above.

EXAMPLE 3

_____ % by Wt.
_____ Azelaic acid 15.0 Chlorocresol 0.1 Titanium dioxide 1.0 Salicylic acid 2.0 Glycerol monostearate 2.0 Cetyl alcohol 3.0 Tween 80 5.0 Sodium laurylethersulfate 10.0 Ethanolamine laurylether sulfate 1.0 Olive oil 2.0 Vitamin C 1.0 Distilled water to 100%

_____

EXAMPLE 4

Same as Example 3, except salicylic acid is used at a 3% level.

EXAMPLE 5

Same as Example 3, except that salicylic acid is used at a 4% level.

EXAMPLE 6

The following composition is suitable for use for subcutaneous injection of alpha-mercapto azelaic acid:

_____ Alpha-monomercapto-azelaic acid 2 mg Tween 80 5 mg Vitamin C 1 mg _____

EXAMPLE 7

A cream having a base of azelaic acid (see Examples 3-5 above) was applied twice a day for two months on 10 women, aged 20-24, with chloasma and a mild form of acne (comedones, pustules, papules, nodules). Three of the cases were affected with a chronic premenstrual form of acne confined to the chin. Following the two months of treatment, all patients were very much improved, both as respects chloasma and acne.

EXAMPLE 8

A cream as described in Example 7 was used to treat 10 cases of acne vulgaris (six males and four females, aged 16-25) of different degrees of severity. It was observed that the postules dry very early (1-2 days), that the nodules become rapidly flat with disappearance of inflammatory reaction and formation of a crust in 4-6 days and that the lesions recover without formation of scars. After two months of treatment, all of the patients were improved. This therapy has been especially useful in those patients with severe forms of acne which did not tolerate a general therapy with antibiotics.

EXAMPLE 9

The cream described in Example 7 was used to treat three girls aged 15-18 afflicted with a non-inflammatory form of acne mainly represented by closed comedones (whiteheads). The patients appeared to be cured of their affliction following 3-4 months of application of the cream.

In the practice of this invention in the treatment of acne, at the beginning of the therapy and also during the course of treatment in the case of inflamed lesions, patients experience a transient itching and burning and the skin appears slightly red and scaly.

CLAIMS:

What is claimed is:

1. A method for the treatment of an individual exhibiting acne which comprises administering to said individual a therapeutically effective amount of an active ingredient in a pharmaceutically acceptable carrier until said condition is reduced or its further development is arrested wherein said active ingredient is at least one dicarboxylic acid containing from 7 to 13 carbon atoms selected from the group consisting of pimelic acid, suberic acid, sebacic acid, azelaic acid, 1,9-nonanedicarboxylic acid, 1.10-decanedicarboxylic acid, and 1,11-undecanedicarboxylic acid or a mono or dimercapto derivative of said acid or a salt thereof.

2. A method as defined in claim 1 wherein said acid is administered orally.

3. A method as defined in claim 1 wherein said acid is administered by injection.

4. A method as defined in claim 1 wherein said acid is administered topically.

5. A method as defined in claim 1 wherein said dicarboxylic acid acid is azelaic acid.

6. A method as defined in claim 1 wherein said dicarboxylic acid is 1,10-decanedicarboxylic acid.

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L29: Entry 2 of 233 File: PGPB Jul 26, 2001

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TITLE: COSMETIC COMPOSIIONS

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INVENTOR-INFORMATION:

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ABSTRACT:

Cosmetic compoaition for topical application to the skin comprising a hydroxyalkyl cyclodextrin, salicylic acid or salicylic acid derivative and water. The compositions herein provide improved anti-acne/anti-inflammatory activity together with reduced skin irritation.

FIELD OF THE INVENTION

[0001] The present invention relates to cosmetic compositions and more particularly, to pigmented foundation make-up compositions and concealers.

BACKGROUND OF THE INVENTION

[0002] A foundation composition can be applied to the face and other parts of the body to even skin tone and texture and to hide pores, imperfections, fine lines and the like. A foundation composition is also applied to moisturize the skin, to balance the oil level of the skin and to provide protection against the adverse effects of sunlight, wind and the harsh environment. Make-up compositions are generally available in the form of liquid or cream suspensions, emulsions, gels, pressed powders or anhydrous oil and wax compositions. Such cosmetic make-up compositions are described in U.S. Pat. No. 3,444,291, U.S. Pat. No. 4,486,405, U.S. Pat. No. 4,804,532, U.S. Pat. No. 3,978,207, U.S. Pat. No. 4,659,562, U.S. Pat. No. 5,143,722 and Nakamura et

al., Preprints of the XIVth I.F.S.C.C. Congress, Barcelona, 1986, Vol. 1, 51-63 (1986).

[0003] Foundations in the form of emulsions are well known and provide good coverage and good skin feel, wear and appearance. At the same time it would be desirable to provide a foundation composition having topical anti-acne activity. It would also be desirable to provide a foundation composition which is mild to the skin and which causes little or no skin irritation. There are many compounds which are known to exhibit anti-acne properties when applied topically to the skin. A commonly used kerotolytic agent having anti-acne activity is salicylic acid. As salicylic acid is virtually insoluble in water, it is difficult to incorporate into cosmetic compositions having an aqueous phase, such as emulsion compositions. Although salicylic acid can be delivered from the pigment-containing oil phase of a water-in-oil emulsion foundation composition for example, this can, however, lead to discolouration of the composition due to interaction between the salicylic acid and pigments, especially of the iron oxide type. It would therefore be desirable to deliver the salicylic acid in soluble form from cosmetic compositions having an aqueous phase.

[0004] Attempts have been made to improve the solubility of salicylic acid in aqueous phase. One way of doing this involves the use of alcohol solvents such as ethanol. However, such compositions can be harsh and can lead to skin irritation. Another way of helping to solubilise salicylic acid in aqueous systems involves the use of solubilising aids such as PVP. For example, WO 95/04517 discloses a make-up composition in the form of an emulsion comprising an acidic anti-acne active dissolved in the aqueous phase and a pigment or mixture of pigments dispersed in the oil phase. PVP is disclosed as a complexing agent for aiding the solubilisation of salicylic acid. Yet another way of helping to solubilise salicylic acid is by using cyclodextrin compounds. Cyclodextrin compounds are known to form inclusion complexes with salicylic acid which can aid solubilisation in aqueous systems. Ointment type compositions comprising cyclodextrin compounds and salicylic acid are known from the following documents: "Influence of cyclodextrins and other additives of the release of salicylic acid from various ointment bases", Yakuzaigaku, 50(4), 341-346 (1990) and "Effect of additives on release of drugs from ointment bases", Yakuzaigaku, 42(1), 10-16 (1982).

[0005] WO 95/31976 discloses a transdermal delivery system for anti-epileptic drug delivery comprising one or more permeation enhancers and a compound selected from tiagabine, its pharmaceutically acceptable salts, pharmaceutically-acceptable C.sub.1-6-alkylesters or ionpairs of tiagabine and salicylic acid or oleic acid. The permeation enhancer can be selected from a group of permeation enhancers which includes hydroxypropyl-beta-cyclodextrin.

[0006] Despite being able to solubilise salicylic acid in the aqueous phases of cosmetic compositions using methods such as described above, there is still a need for cosmetic compositions having improved anti-acne/anti-inflammatory activity together with skin mildness/reduced skin irritation and improved product stability.

[0007] It has now been surprisingly found that by incorporating salicylic acid or a salicylic acid derivative and a hydroxy (C1-C4) alkyl cyclodextrin compound into an aqueous cosmetic composition comprising water there is provided a composition having improved anti-acne/anti-bacterial activity together with reduced skin irritation.

[0008] It is accordingly a primary object of this invention to provide a cosmetic composition having improved anti-acne activity.

[0009] It is also an object of the invention to provide a cosmetic composition having reduced skin irritation.

[0010] It is a further object of the invention to provide a cosmetic composition in the form of an emulsion having improved product stability.

SUMMARY OF THE INVENTION

[0011] In accordance with the present invention, there is provided a cosmetic composition comprising hydroxy (C1-C4) alkyl cyclodextrin, salicylic acid or salicylic acid derivative, and water.

[0012] The cosmetic compositions of the present invention provide improved anti-acne/anti-inflammatory activity, mildness and reduced skin irritation.

[0013] All levels and ratios are by weight of total composition, unless otherwise indicated. Chain lengths and degrees of alkoxylation are also specified on a weight average basis.

DETAILED DESCRIPTION OF THE INVENTION

[0014] The cosmetic composition according to the present invention comprises a hydroxy (C1-C4alkyl) cyclodextrin compound and salicylic acid or salicylic acid derivative.

[0015] Hydroxy (C1-C4 alkyl) Cyclodextrin compound

[0016] The first essential ingredient of the cosmetic compositions herein is a hydroxyalkyl cyclodextrin compound. As used herein, the term "cyclodextrin" (CD) includes cyclodextrins containing from six to twelve glucose units, especially, alpha-, beta-, gamma-, cyclodextrins. Suitable hydroxyalkyl cyclodextrin compounds for use herein are those compounds capable of forming inclusion complexes with salicylic acid or salicylic acid derivatives. Preferably, the hydroxyalkyl cyclodextrin compounds for use herein are hydroxy (C1-C4 alkyl) cyclodextrin compounds.

[0017] The individual hydroxyalkyl cyclodextrins can also be linked together, for example, using multifunctional agents to form oligomers, polymers, etc.

[0018] It is also suitable to use mixtures of hydroxyalkyl cyclodextrins to provide a mixture of complexes.

[0019] A preferred hydroxyalkyl cyclodextrin compound for use in the compositions herein is hydroxypropyl-beta-cyclodextrin.

[0020] The hydroxyalkyl cyclodextrin compound is present in the cosmetic compositions of the present invention at a level of from about 0.1% to about 20%, preferably from about 0.8% to about 15%, especially from about 4% to about 12%, by weight of the composition.

[0021] A second essential component of the compositions herein is salicylic acid or salicylic acid derivative. The term salicylic acid derivative as used herein means any 2, 3 or 4--OR substituted benzoic acid compound having the formula: 1

[0022] wherein R is selected from C.sub.1-C.sub.6 alkyl or C.sub.1-C.sub.6 acyl, preferably wherein R is selected from C.sub.2-C.sub.3 alkyl or C.sub.2-C.sub.3 acyl. Especially preferred herein is salicylic acid.

[0023] The salicylic acid or salicylic acid derivative is present in an amount which is safe and effective for providing anti-acne/anti-inflammat- ory activity, and preferably at a level of from about 0.1% to about 10%, more preferably from about 0.1% to about 5%, and especially from about 0.5% to about 2%, by weight of composition.

[0024] As used herein, "safe and effective amount" means a sufficient amount of a compound, composition or other material described by this phrase to significantly induce a positive modification in the condition being treated, but low enough to avoid undue side effects (e.g., significant skin irritation or sensitization), within the scope of sound judgement of the skilled person.

The safe and effective amount of the compound, composition or other material may vary with the particular skin being treated, the age and physical condition of the biological subject being treated, the severity of the condition, the duration of treatment, the nature of concurrent therapy, the specific compound, composition, or other material employed, the particular cosmetically acceptable topical carrier utilized, and the factors within the knowledge and expertise of the skilled person.

[0025] The cosmetic compositions of the present invention can take any form which is suitable for use as a cosmetic, for example, emulsion, aqueous gel, cream, lotion, suspension, and the like. Preferably, the cosmetic compositions are in the form of an emulsion having at least one aqueous phase and at least one oil phase. More preferably, the cosmetic compositions of the present invention are in the form of water-in-oil emulsions.

[0026] The emulsion compositions herein preferably comprises from about 20% to about 95%, more preferably from about 30% to about 70% by weight of oil phase, and from about 5% to about 80%, more preferably from about 30% to about 70% by weight of aqueous phase. The aqueous phase preferably comprises from about 40% to about 90%, more preferably from about 60% to about 80% by weight of aqueous phase of water. The total level of water in the emulsion compositions herein is in the range of from about 10% to about 60%, more preferably from about 30% to about 50% by weight of composition.

[0027] The oil phase can comprise a mixture of silicone oils and non-silicone organic oils.

[0028] In preferred embodiments the oil phase comprises a mixture of volatile silicones and non-volatile silicones. The silicones are useful herein for providing skin conditioning properties. The silicone fluid is present in an amount of from about 1% to about 50% by weight. Suitable volatile silicones include cyclic and linear volatile polyorganosiloxanes. The term "nonvolatile" as used herein shall mean the material has a vapour pressure of no more than 0.1 mm Hg at one atmosphere and 25.degree. C. The term "volatile" as used herein shall mean materials which are not nonvolatile or which have a vapour pressure at the same conditions of more than 0.1 mm Hg.

[0029] A description of various volatile silicones is found in Todd, et al.. "Volatile Silicone Fluids for Cosmetics", 91 Cosmetics and Toiletries 27-32 (1976).

[0030] Preferred cyclic silicones include cyclic dimethyl siloxane chains containing an average of from about 3 to about 9 silicon atoms, preferably from about 4 to about 5 silicon atoms. Preferred linear silicones include the polydimethylsiloxanes containing an average of from about 3 to about 9 silicon atoms. The linear volatile silicones generally have viscosities of less than about 5 centistokes at 25.degree. C., while the cyclic materials have viscosities of less than about 10 centistokes. Examples of silicone oils useful in the present invention include: Dow Corning 344, Dow Corning 245, Dow Corning 345, and Dow Corning 200 (manufactured by the Dow Corning Corporation): Silicone 7207 and Silicone 7158 (manufactured by the Union Carbide Corporation). SF:202 (manufactured by General Electric) and SWS-03314 (manufactured by Stauffer Chemical).

[0031] The nonvolatile silicones will have vapour pressures as previously defined, and preferably will have an average viscosity of from about 10 to about 100,000 cps at 25.degree. C., more preferably from about 100 to about 10,000 cps, even more preferably from about 500 to about 6000 cps. Lower viscosity non-volatile silicone conditioning agents, however, can also be used. Viscosity can be measured by means of a glass capillary viscometer as set forth in Dow Corning Corporate Test Method CTM0004, Jul. 20, 1970.

[0032] Suitable non-volatile silicone fluids for use herein include polyalkyl siloxanes, polyaryl siloxanes, polyalkylaryl siloxanes, polysiloxanes with amino functional substitutions, polyether siloxane copolymers, and mixtures

thereof. The siloxanes useful in the present invention may be substituted and/or endcapped with any number of moieties, so long as the material remains suitable for use in a topical cosmetic product, including, for example, methyl, hydroxyl, ethylene oxide, propylene oxide, amino and carboxyl. However, other silicone fluids having skin conditioning properties may be used. The non-volatile polyalkyl siloxane fluids that may be used include, for example, polydimethylsiloxanes. These siloxanes are available, for example, from the General Electric Company as a Viscasil (RTM) series and from Dow Corning as the Dow Corning 200 series. Preferably, the viscosity ranges from about 10 mm.sup.2.s.sup.-1 to about 100,000 mm.sup.2.s.sup.-1 at 25.degree. C. The polyalkylaryl siloxane fluids that may be used, also include, for example, polymethylphenylsiloxanes. These siloxanes are available, for example, from the General Electric Company as SF 1075 methyl phenyl fluid or from Dow Corning as 556 Cosmetic Grade Fluid. The polyether siloxane copolymer that may be used includes, for example, a polypropylene oxide modified dimethylpolysiloxane (e.g., Dow Corning DC-1248) although ethylene oxide or mixtures of ethylene oxide and propylene oxide may also be used.

[0033] References disclosing suitable silicone fluids include U.S. Pat. No. 2,826,551, Green; U.S. Pat. No. 3,964,500, Drakoff, issued Jun. 22nd, 1976; U.S. Pat. No. 4,364,837, Pader; and GB-A-849,433, Woolston. In addition, Silicone Compounds distributed by Petrarch Systems Inc., 1984 provides an extensive (though not exclusive) listing of suitable silicone fluids.

[0034] Preferred non-volatile silicones for use herein include polydiorganosiloxane-polyoxyalkylene copolymers containing at least one polydiorganosiloxane segment and at least one polyoxyalkylene segment. The polydiorganosiloxane segment has the general formula:

R.sub.bSiO.sub.(4-b)/2

[0035] siloxane units wherein b has a value of from about 0 to about 3, inclusive, there being an average value of approximately two R radicals per silicon for all siloxane units in the copolymer, and R denotes a radical selected from methyl, ethyl, vinyl, phenyl and a divalent radical bonding said polyoxyalkylene segment to the polydiorganosiloxane segment. The polyoxyalkylene segment has an average molecular weight of at least about 500, preferably at least about 1000, and comprising from about 0 to about 50 mol percent polyoxypropylene units and from about 50 to about 100 mol percent polyoxyethylene units, at least one terminal portion of said polyoxyalkylene segment being grafted to, or covalently bonded directly or indirectly to a polydiorganosiloxane segment, any terminal portion of said polyoxyalkylene segment not bonded to said polydiorganosiloxane segment being satisfied by a terminating radical; the weight ratio of polydiorganosiloxane segments to polyoxyalkylene segments in said copolymer preferably having a value of from about 2 to about 8. Such polymers are described in U.S. Pat. No. 4,268,499.

[0036] Preferred for use herein are polydiorganosiloxane-polyoxyalkylene copolymers having the general formula: 2

[0037] wherein R.sup.1 is selected from C1 to C5 alkyl groups, preferably methyl, z is in the range of from 1 to 4, x and y are selected such that the weight ratio of polydiorganosiloxane segments to polyoxalkylene segments is from about 2 to about 8, the mol ratio of a:(a+b) is from about 0.5 to about 1, and R is a chain terminating group, especially selected from hydrogen; hydroxyl; alkyl, such as methyl, ethyl, propyl, butyl, benzyl; aryl, such as phenyl; alkoxy such as methoxy, ethoxy, propoxy, butoxy; benzyloxy; aryloxy, such as phenoxy; alkenyloxy, such as vinyloxy and allyloxy; acyloxy, such as acetoxy, acryloxy and propionoxy and amino, such as dimethylamino.

[0038] More preferred for use herein are polydiorganosiloxane-polyoxyalkyl- ene copolymers having the formula: 3

[0039] wherein x, y and R are as defined above.

[0040] The number of and average molecular weights of the segments in the copolymer are such that the weight ratio of polydiorganosiloxane segments to polyoxyalkylene segments in the copolymer is preferably from about 2.5 to about 4.0.

[0041] Suitable copolymers are available commercially under the tradenames Belsil (RTM) from Wacker-Chemie GmbH, Geschaftsbereich S, Postfach D-8000 Munich 22 and Abil (RTM) from Th. Goldschmidt Ltd,. Tego House, Victoria Road, Ruislip, Middlesex, HA4 0YL. Particularly preferred for use herein are Belsil (RTM) 6031, Abil (RTM) B88183, DC3225C, DC5200, Abil We09, Abil EM90, BY22-008 (Dow Corning) and SF1328 (GE Silicones). A preferred silicone herein is known by its CTFA designation as dimethicone copolyol.

[0042] The compositions of the present invention preferably comprise from about 20% to about 95% by weight of composition of oil phase. The oil phase preferably comprises from about 0.01% to about 25%, more preferably from about 0.05% to about 10% by weight of the oil phase of non-volatile silicones. The oil phase preferably comprises from about 75% to about 99.99%, more preferably from about 90% to about 99.95% by weight of the oil phase of volatile silicones.

[0043] The oil phase in the emulsions of the present invention can also comprise one or more non-silicone organic oil, such as natural or synthetic oil selected from mineral, vegetable, and animal oils, fats and waxes, fatty acid esters, fatty alcohols, fatty acids and mixtures thereof, which ingredients are useful for achieving emollient cosmetic properties. It will be understood that the silicone oil-containing phase may contain, for example, up to about 25%, preferably up to only about 10% of oil phase soluble emulsifier ingredients. Such ingredients are not to be considered as oil phase components from the viewpoint of determining the oil phase level.

[0044] Suitable organic oils for use herein include, for example, optionally hydroxy-substituted C.sub.8-C.sub.50 unsaturated fatty acids and esters thereof, C.sub.1-C.sub.24 esters of C.sub.8-C.sub.30 saturated fatty acids such as isopropyl myristate, isopropyl palmitate, cetyl palmitate and octyldodecylmyristate (Wickenol 142), beeswax, saturated and unsaturated fatty alcohols such as behenyl alcohol and cetyl alcohol, hydrocarbons such as mineral oils, petrolatum and squalane, fatty sorbitan esters (see U.S. Pat. No. 3,988,255, Seiden, issued Oct. 26, 1976), lanolin and lanolin derivatives, animal and vegetable triglycerides such as almond oil, peanut oil, wheat germ oil, linseed oil, jojoba oil, oil of apricot pits, walnuts, palm nuts, pistachio nuts, sesame seeds, rapeseed, cade oil, corn oil, peach pit oil, poppyseed oil, pine oil, castor oil, soybean oil, avocado oil, safflower oil, coconut oil, hazelnut oil, olive oil, grapeseed oil, shea butter, shorea butter, and sunflower seed oil and C.sub.1-C.sub.24 esters of dimer and trimer acids such as diisopropyl dimerate, diisostearylmalate, diisostearyldimerate and triisostearyltrimerate. Of the above, highly preferred are the mineral oils, petrolatums, unsaturated fatty acids and esters thereof and mixtures thereof.

[0045] Optional Ingredients

[0046] A wide variety of optional ingredients can be incorporated into the compositions. The following are non-limiting examples of numerous ingredients that can be used.

[0047] Acidic Skin Care Active

[0048] The compositions of the present invention can comprise an acidic skin care active, in addition to salicylic acid or salicylic acid derivative.

[0049] Suitable acidic skin care actives can be selected from hydroxycarboxylic acids. As used herein the term acidic skin care active means any skin care active containing an acidic functional group (e.g. carboxy, sulfonic).

[0050] Suitable hydroxycarboxylic acids can be selected from hydroxymonocarboxylic acids having the following chemical structure:

R.sub.1(CR.sub.2OH).sub.m(CH.sub.2).sub.nCOOH

[0051] wherein R.sub.1, R.sub.2=H, alkyl, aralkyl or aryl group of saturated or unsaturated, straight or branched chain or cyclic form, having from 1 to 25 carbon atoms; m=1, 2, 3, 4, 5, 6, 7, 8 or 9; n=0 or a numerical number up to 23.

[0052] The hydroxymonocarboxylic acid may be present as a free acid, lactone, or salt form, The lactone form could be either inter or intramolecular lactone, however, most common ones are intramolecular lactones with a ring structure formed by elimination of one or more water molecules between a hydroxy group and the carboxylic group. Since the hydroxymonocarboxylic acids are organic in nature, they may form a salt or a complex with an inorganic or organic base such as ammonium hydroxide, sodium or potassium hydroxide, or triethanolamine.

[0053] The hydroxymonocarboxylic acid and its related compounds may exist as stereoisomers such as D, L, and DL forms.

[0054] Typical alkyl, aralkyl and aryl groups for R.sub.1 and R.sub.2 include methyl, ethyl, propyl, isopropyl, benzyl and phenyl. The hydrogen atoms of the R.sub.1 and R.sub.2 and (CH.sub.2)n may be substituted by a nonfunctional element such as F, Cl, Br, I, S or a radical such as a lower alkyl or alkoxy, saturated or unsaturated, having 1 to 9 carbon atoms. Representative hydroxymonocarboxylic acids are 2-hydroxyacetic acid (glycolic acid), 2-hydroxypropanoic acid (lactic acid), 2-methyl 2-hydroxypropanoic acid (methyllactic acid), 2-hydroxybutanoic acid, phenyl 2-hydroxyacetic acid (mandelic acid), phenyl 2-methyl 2-hydroxyacetic acid, 3-phenyl 2-hydroxypropanoic acid (phenyllactic acid), 2,3-dihydroxypropanoic acid (glyceric acid), 2,3,4-trihydroxybutanoic acid, 2,3,4,5-tetrahydroxypentanoic acid, 2,3,4,5,6-pentahydroxyhexanoic acid, 2-hydroxydodecanoic acid (alpha hydroxylauric acid), 2,3,4,5,6,7-hexahydroxyheptanoic acid, diphenyl 2-hydroxyacetic acid (benzilic acid), 4-hydroxymandelic acid, 4-chloromandelic acid, 3-hydroxybutanoic acid, 4-hydroxybutanoic acid, 2-hydroxyhexanoic acid, 5-hydroxydodecanoic acid, 12-hydroxydodecanoic acid, 10-hydroxydecanoic acid, 16-hydroxyhexadecanoic acid, 2-hydroxy-3-methylbutanoic acid, 2-hydroxy-4-methylpentanoic acid, 3-hydroxy-4-methoxymandelic acid, 4-hydroxy-3-methoxymendelic acid, 2-hydroxy-2-methylbutanoic acid, 3-(2-hydroxyphenyl) lactic acid, 3-(4-hydroxyphenyl) lactic acid, hexahydromandelic acid, 3-hydroxy-3-methylpentanoic acid, 4-hydroxydecanoic acid, 5-hydroxydecanoic acid and aleuritic acid.

[0055] Another type of hydroxyacid suitable for use herein is a hydroxydicarboxylic acid having the following formula:

HOOC(CHOH).sub.m(CH.sub.2).sub.nCOOH

[0056] wherein m=1, 2, 3, 4, 5, 6, 7, 8 or 9; n=0 or an integer up to 23.

[0057] The hydroxydicarboxylic acid may also be present as a free acid, lactone or salt form. The hydroxydicarboxylic acid and its related compounds may also exist as stereoisomers such as D, L, DL and meso forms.

[0058] The hydrogen attached to the carbon atom may be substituted by a nonfunctional element such as F, Cl, Br, I, S, or a radical such as a lower saturated or unsaturated alkyl or alkoxy having from 1 to 9 carbon atoms.

[0059] Representative hydroxydicarboxylic acids are 2-hydroxypropanedioic acid (tartronic acid), 2-hydroxybutanedioic acid (malic acid), erythraric acid and threaric acid (tartaric acid), arabiraric acid, ribaric acid, xylaric acid and lyxaric acid, glucaric acid (saccharic acid), galactaric acid (mucic acid), mannaric acid, gularic acid, allaric acid, altraric acid, idaric acid and talaric acid.

[0060] A third type of hydroxyacid suitable for use herein is a miscellaneous group of compounds which is not readily represented by the above generic structure of either the first type or the second type described above. Included in the third type of hydroxyacids are the following:

[0061] Hydroxycarboxylic acids of formula:

R(OH).sub.m(COOH).sub.n

[0062] wherein m, n=1, 2, 3, 4, 5, 6, 7, 8 or 9, R=H, alkyl, aralkyl or aryl group of saturated or unsaturated, straight or branched chain or cyclic form, having from 1 to 25 carbon atoms; citric acid, isocitric acid, citramalic acid, agaricic acid (n-hexadecylcitric acid), quinic acid, uronic acids including glucuronic acid, glucuronolactone, galacturonic acid, galacturonolactone, hydroxypyruvic acid, hydroxypyruvic acid phosphate, ascorbic acid, dihydroascorbic acid, dihydroxytartaric acid, 2-hydroxy-2-methylbutanoic acid, 1-hydroxy-1-cyclopropane carboxylic acid, 2-hydroxyhexanedial, 5-hydroxylysine, 3-hydroxy-2-aminopentanoic acid, tropic acid, 4-hydroxy-2,2-diphenylbutanoic acid, 3-hydroxy-3-methylglutaric acid, and 4-hydroxy-3-pentenoic acid.

[0063] The third type of hydroxyacid may also be present as a free acid, lactone or salt form and may also exist as stereoisomers such as D, L, DL and meso forms.

[0064] The hydrogen atom attached to the carbon atom may be substituted by a nonfunctional element such as F, Cl, Br, I, S or a radical such as a lower saturated or unsaturated alkyl or alkoxy having from 1 to 9 carbon atoms.

[0065] Mixtures of hydroxy acids can also be used in the compositions herein. Hydroxy acids are useful herein from the viewpoint of reducing wrinkles and improving skin feel and appearance.

[0066] Other suitable hydroxy acids for use herein include retinoic acid, and azelaic acid.

[0067] The acidic skin care active can be present at a level of from about 0.1% to about 10%, preferably from about 0.1 % to about 5 %, more preferably from about 0.5 % to about 3%, by weight of composition.

[0068] The acidic skin care active can be solubilized in water or a hydroalcoholic solution, for example, solutions based upon C.sub.2-C.sub.6 alcohols, diols and polyols, preferred alcohols being selected from ethanol, dipropylene glycol, butylene glycol, hexylene glycol, and mixtures thereof.

[0069] The compositions of the present invention can also comprise a solubilizing agent, in addition to the cyclodextrin compound, for solubilizing the acidic skin care active and/or salicylic acid or salicylic acid derivative. Any solublizing agent suitable for use in a cosmetic composition can be used. Preferably the solubilizing agent herein is selected from polyoxyethylene-polyoxypropylene ethers of C4 to C22 alcohols, pyrrolidone-based solubilising agents, polyethylene glycol based nonionic surfactants having an HLB of greater than about 15, preferably greater than about 18, and mixtures thereof.

[0070] Pyrrolidone-based solubilising agents suitable for use herein include polyvinylpyrrolidone or C.sub.1-C.sub.4 alkyl polyvinylpyrrolidone having a molecular weight (viscosity average) in the range from about 1500 to about 1,500,000, preferably from about 3000 to about 700,000, more preferably from about 5000 to about 100,000. Suitable examples of pyrrolidone-based solubilising agents are polyvinylpyrrolidone (PVP) (or povidone) and butylated polyvinylpyrrolidone. The most preferred pyrrolidone-based solubilising agent herein is polyvinylpyrrolidone. PVP is commercially available under the trade name Luviskol (RTM) from BASF. A preferred PVP solubilising agent herein is Luviskol K17 which has a viscosity-average molecular weight of about 9,000.

Other pyrrolidone-based solubilising agents for use herein include C.sub.1-C.sub.18 alkyl or hydroxyalkyl pyrrolidones such as lauryl pyrrolidone.

[0071] The pyrrolidone-based solubilising agent is preferably present in the composition herein in a level of from about 0.1% to about 10%, more preferably from about 0.1% to about 5%, especially from about 0.5% to about 2% by weight of composition.

[0072] Preferred embodiments of the invention additionally comprise from about 0.01% to about 5% by weight of an additional acid or salt thereof which is soluble in water at pH values of less than or equal to the pK.sub.a of the corresponding acid, for example, an acid selected from citric acid, boric acid, and salts, and mixtures thereof. These materials are valuable herein in combination with the pyrrolidone-based complexing agent from the viewpoint of aiding solubilization of the acidic skin care active/salicylic acid or salicylic acid derivative. Particularly preferred herein from this viewpoint is a sodium salt of citric acid. In preferred embodiments, the acid or salt thereof is soluble to a level of at least 5% w/w at 25.degree. C.

[0073] A particularly preferred solubilizing agent in the compositions of the present invention is a nonionic surfactant selected from polyoxyethylene-polyoxypropylene ethers of C4-C22 alcohols, and mixtures thereof. The nonionic surfactant is valuable herein as a solubilising agent for the acidic skin care active in the discontinuous aqueous phase. Suitable polyoxyethylene-polyoxypropylene ethers of C4-C22 alcohols for use herein include those having the general formula: 4

[0074] wherein x is in the range of from about 1 to about 35, preferably from about 1 to about 10, y is in the range of from about 1 to about 45, preferably from about 1 to about 30 and R is a straight chain or branched chain C4 to C22 alkyl group, or a mixture thereof. In preferred embodiments (x+y) is greater than or equal to 5, preferably greater than or equal 10, more preferably greater than or equal to 15. The ratio of x:y is in the range from 1:1 to 1:10.

[0075] Examples of suitable R groups in the above formula include cetyl, butyl, stearyl, cetearyl, decyl, lauryl and myristyl.

[0076] Examples of suitable polyoxyethylene-polyoxypropylene alcohol ethers include (using CTFA designations) PPG-4-Ceteth-1, PPG-4-Ceteth-5, PPG-4-Ceteth-10, PPG-4-Ceteth-20, PPG-5-Ceteth-20, PPG-8-Ceteth-1, PPG-8-Ceteth-2, PPG-8-Ceteth-5, PPG-8-Ceteth-10, PPG-8-Ceteth-20, PPG-2-Buteth-3, PPG-2-Buteth-5, PPG-5-Buteth-7, PPG-9-Buteth-12, PPG-28-Buteth-35, PPG-12-Buteth-16, PPG-15-Buteth-20, PPG-20-Buteth-30, PPG-24-Buteth-27, PPG-26-Buteth-26, PPG-33-Buteth-45, PPG-2-Ceteareth-9, PPG-4-Ceteareth- 12, PPG- 10-Ceteareth-20, PPG-2-Deceth-10, PPG-4-Deceth-4, PPG-6-Deceth-4, PPG-6-Deceth-9, PPG-8-Deceth-6, PPG-2-Isodeceth-4, PPG-2-Isodeceth-6, PPG-2-Isodeceth-9, PPG-2-Isodeceth-12, PPG-3-Isodeceth-1, PPG-4-Laureth-5, PPG-4-Laureth-2, PPG-4-Laureth-7, PPG-5-Laureth-5, PPG-25-Laureth-25, PPG-3-Myreth-11, PPG-3-Myreth-3 and PPG-9-Steareth-3.

[0077] Preferred polyoxyethylene-polyoxypropylene ethers for use herein are ethers of C8 to C 16 alcohols having the formula (I) wherein x is from 2 to 12 and y is from 10 to 30 and where the ratio of x:y is in the range of from about 1:2 to about 1:8.

[0078] Particularly preferred polyoxyethylene-polyoxypropylene ethers of C4 to C22 alcohols for use herein are those having the formula (I) above wherein R is cetyl and wherein x is in the range of from about 4 to about 8, and wherein y is in the range of from about 15 to about 25, and the ratio of x:y is in the range of from about 1:3 to about 1:5. A particularly preferred ether from the viewpoint of improving solubilisation of the acidic skin care active is PPG-5-Ceteth-20, which is available under the tradename Procetyl AWS.

[0079] The solubilizing agent herein is preferably present at a level of from about 0.1% to about 15%, more preferably from about 1% to about 10%, especially

from about 2% to about 8% by weight of composition.

[0080] Preferred embodiments herein comprise a pigment or mixture of pigments. The pigment used herein must be compatible with any acidic skin care active/salicylic acid/salicylic acid derivative which is present in the composition and have excellent overall colour stability. Suitable pigments for use herein can be inorganic and/or organic. Also included within the term pigment are materials having a low colour or lustre such as matte finishing agents, and also light scattering agents. Examples of suitable pigments are iron oxides, rutile titanium dioxide, anatase titanium dioxide, ferric oxide, ferrous oxide, chromium oxide, chromium hydroxide, manganese violet, acylglutamate iron oxides, ultramarine blue, D&C dyes, carmine, and mixtures thereof. Depending upon the type of make-up composition, eg. foundation or blusher, a mixture of pigments will normally be used.

[0081] The foundation composition can also include at least one matte finishing agent. The function of the matte finishing agent is to hide skin defects and reduce shine. Such cosmetically acceptable inorganic agents, i.e., those included in the CTFA Cosmetic Ingredient Dictionary, Third Ed., as silica, hydrated silica, silicone-treated silica beads, mica, talc, polyethylene, titanium dioxide, bentonite, hectorite, kaolin, chalk, diatomaceous earth, attapulgite zinc-oxide and the like may be utilized. Of particular usefulness as a matte finishing agent is low lustre pigment such as titanated mica (mica coated with titanium dioxide) coated with barium sulfate. Of the inorganic components useful as a matte finishing agent low lustre pigment, talc, polyethylene, hydrated silica, kaolin, titanium dioxide and mixtures thereof are particularly preferred. Materials suitable for use herein as light-scattering agents can be generally described as spherical shaped inorganic materials having a particle size of up to about 100 microns, preferably from about 5 to about 50 microns, for example spherical silica particles.

[0082] Other examples of pigments include lakes of organic colorants such as FD&C Red No. 7 calcium lake, FD&C Yellow No. 5 aluminium lake, D&C Red No. 9 barium lake, and D&C Red No. 30.

[0083] The preferred pigments for use herein from the viewpoint of moisturisation, skin feel, skin appearance and emulsion compatibility are treated pigments. The pigments can be treated with compounds such as amino acids such as lysine, silicones, lauroyl, collagen, polyethylene, lecithin and ester oils. The more preferred pigments are the silicone (polysiloxane) treated pigments.

[0084] A highly preferred pigment for use herein is a pigment which has been coated with organosilicon component selected from a polyorganosiloxane or a silane wherein the coated pigment has a hydrogen potential of less than about 2.0, preferably less than about 1.0, more preferably less than about 0.5 ml, and especially less than about 0.1 ml H.sub.2/g of coated pigment. The pigment preferred for use herein is in particulate form. The pigment is incorporated into the continuous oil phase in the compositions herein. The coatings used can be bonded to the pigment surface by covalent bonding, physical adsorption or adhesion, preferably by covalent bonding to the surface of the pigment. The function of the coatings herein is to hydrophobically-modify the pigments so that thay are "wettable" in the continuous silicone phase of the water-in-silicone emulsions. The coated pigment is also useful herein from the viewpoint of reducing hydrogen gas evolution and improving product stability.

[0085] Without wishing to be limited by theory it is believed that although the pigments are present in the oil phase of the water-in-oil emulsion, hydrogen ions from the aqueous phase can pass through the interface of the emulsion into the oil phase, where they are available to react with the pigment coatings, e.g. to give off hydrogen gas. However, by using organosilicon-coated pigments having a hydrogen potential of less than about 2 ml H.sub.2/g of coated pigment, hydrogen gas generation is reduced.

[0086] The hydrogen potential of the coated pigment is measured herein using the following test method:

[0087] A dispersion of the coated pigment containing 20 g of coated pigment is placed in a flask on a magnetic stirrer and 100 ml of a 2% ethanolic solution of potassium hydroxide is added with stirring at ambient temperature. The hydrogen gas which is evolved is collected in a second flask at ambient temperature and pressure (25.degree. C., 1 At). The hydrogen gas released can therefore be volumetrically measured.

[0088] A wide variety of organosilicon components can be used for treating the pigments herein. A suitable polyorganosiloxane herein is selected from:

[0089] (A) material of the formula:

(R.sup.1).sub.3SiO--(Si(R.sup.2R.sup.3)O).sub.p--Si(R.sup.2R.sup.3)OA.sub.- 2

[0090] wherein p is 1 to 1000, preferably from 1 to 100, A.sub.2 is hydrogen or an alkyl group having from 1 to 30 carbon atoms, R.sup.1 is a C.sub.1-C.sub.30 alkyl, preferably methyl, R.sup.2 and R.sup.3 are independently selected from a C.sub.1-C.sub.30 alkyl and a phenyl, preferably wherein R.sup.2 and R.sup.3 are both methyl or wherein R.sup.2 is methyl and R.sup.3 is phenyl ; or

[0091] (B) material of the formula:

(R.sup.1).sub.3SiO(Si(R.sup.2)(H)--O).sub.i--Si(R.sup.1).sub.3

[0092] wherein i is 1 to 1000, preferably 1 to 100, and wherein R.sup.1 and R.sup.2 are as defined above for formula (A).

[0093] In preferred embodiments the organosilicon component is selected from a silane. The silane can be selected from material of the formula:

A.sub.1SiX.sub.1X.sub.2X.sub.3 (C)

[0094] wherein A is an alkyl or alkenyl group having from 1 to 30 carbon atoms, and X.sub.1, X.sub.2 and X.sub.3 are independently C.sub.1-C.sub.4 alkoxy preferably methoxy or ethoxy, or halo, preferably chloro.

[0095] When the pigment herein is treated with silane material having the formula (C) described herein above a pigment having the following formula (1) is produced:

P--O--Si(OH)(A)--[--O--Si(OH)(A)--].sub.0-100--OH

[0096] wherein P is an atom in the pigment surface and each A is an alkyl or alkenyl group having up to 30 carbon atoms. A number of adjacent polysiloxane chains as shown in formula (1) can be cross-linked through oxygen atoms to form a polysiloxane chain with up to 100 repeating --Si(--OP)--O--units that extend along the pigment surface, in addition to the polysiloxane chain which extends away from the pigment surface. Examples of linear or branched alkyl groups are methyl, ethyl, propyl, butyl, pentyl, hexyl, heptyl, octyl, and so forth up to octadecyl. "Alkenyl" includes carbon chains with one or more double bonds; examples of such groups include ethylene, propylene, acrylyl, methacrylyl, and residues of unsaturated fatty acids such as oleic (C.sub.17C.sub.33--), linoleic (C.sub.17H.sub.31--), and linolenic (C.sub.17H.sub.29--).

[0097] When the pigment herein is treated with polyorganosiloxane material having the formula (A) described hereinabove a pigment having the following formula (2) is produced:

P--O--(Si(R.sup.2R.sup.3)O).sub.p--Si(R.sup.1).sub.3 (2)

[0098] wherein p is 1-1000, preferably 1 to 100, R.sup.1, R.sup.2 and R.sup.3 are as defined above for formula (A) and P is an atom in the pigment surface.

[0099] When the pigment herein is treated with polyorganosiloxane material having the formula (B) described hereinabove a pigment having the following formula (3) is produced:

(R.sup.1).sub.3SiO--[Si(R.sup.2)(--OP)--O--].sub.p--Si(R.sup.1).sub.3 (3)

[0100] wherein each P is an atom in the pigment surface, p is from 1 to 1000, preferably from 1 to 100, R.sup.1 and R.sup.2 are as defined above in formula (B) and in which each of the up to 100 repeating (Si--O) units is bonded through an oxygen atom to the pigment surface.

[0101] The pigment (or a mixture of two or more pigments) can be coated by placing it in dry, finely divided form in a mixer, adding the organosilicon component, and mixing. The organosilicon coating is preferably present at a level of from about 0.01% to about 5%, more preferably from about 0.1% to about 4%, and especially from about 0.5% to about 2%, by weight of the organosilicon coated pigment.

[0102] The most preferred coated pigment from the viewpoint of reducing hydrogen gas evolution and improving product stability is Cardre 70429.

[0103] The total concentration of the coated pigment may be from about 0.1 to about 25% by weight and is preferably from about 1 to about 15%, more preferably from about 8% to about 12% by weight of the total composition, the exact concentration being dependent to some extent upon the specific mixture of pigments selected for use in a foundation make-up or blusher to achieve the desired shades. The preferred compositions contain from about 2% to about 20% by weight of titanium dioxide and most preferably from about 5% to about 10% by weight of titanium dioxide.

[0104] A highly preferred component of the compositions herein is a humectant or mixture of humectants. The humectant or mixture of humectants herein is present in an amount of from about 0.1% to about 30% preferably from about 1% to about 25%, and more preferably from about 1% to about 10% by weight of composition. Suitable humectants are selected from glycerine and polyglycerylmethacrylate lubricant having a viscosity at 25.degree. C. of 300,000 to 1,100,000 cps; a specific gravity at 25.degree. C. of 1 to 1.2 g/ml, a pH of 5.0 to 5.5; a bound water content of 33 to 58%; and, a free water content from 5 to 20%.

[0105] The humectant can be incorporated at least partly into the oil phase of a water-in-oil emulsion. The oil phase preferably comprises from about 0.1% to about 10%, more preferably from about 0.1% to about 3% by weight of humectant on a composition basis. The humectant can be introduced into the oil phase in the form of a mixture with or incorporated within a particulate lipophilic or hydrophobic carrier material.

[0106] Polyglycerylmethacrylate lubricants having the desired properties are marketed by Guardian Chemical Corporation under the trademark "Lubrajel". The "Lubrajels" identified as "Lubrajel DV", "Lubrajel MS", and "Lubrajel CG" are preferred in the present invention. The gelling agents sold under these trademarks contain about 1% propylene glycol.

[0107] Other suitable humectants include sorbitol, panthenols, propylene glycol, dipropylene glycol, butylene glycol, hexylene glycol, alkoxylated glucose derivatives, such as Glucam (RTM) E-20, hexanetriol, and glucose ethers, and mixtures thereof.

[0108] The panthenol moisturiser can be selected from D-panthenol ([R]-2,4-dihydroxy-N-[3-hydroxypropyl)]-3,3-dimethylbutamide), DL-panthenol, calcium pantothenate, royal jelly, panthetine, pantotheine, panthenyl ethyl ether, pangamic acid, pyridoxin, pantoyl lactose and Vitamin B complex.

[0109] The preferred humectant herein is glycerine. Chemically, glycerine is

1,2,3-propanetriol and is a product of commerce.

[0110] A preferred component of the compositions herein, in addition to the organic amphiphilic surfactant is a polyol ester skin conditioning agent.

[0111] The compositions of the present invention preferably comprise from about 0.01% to about 20%, more preferably from about 0.1% to about 15%, and especially from about 1% to about 10% by weight of the polyol ester. The level of polyol ester by weight of the oil in the composition is preferably from about 1% to about 30%, more preferably from about 5% to about 20%.

[0112] The polyol ester preferred for use herein is a nonocclusive liquid or liquifiable polyol carboxylic acid ester. These polyol esters are derived from a polyol radical or moiety and one or more carboxylic acid radicals or moieties. In other words, these esters contain a moiety derived from a polyol and one or more moieties derived from a carboxylic acid. These carboxylic acid esters can also be derived from a carboxylic acid. These carboxylic acid esters can also be described as liquid polyol fatty acid esters, because the terms carboxylic acid and fatty acid are often used interchangeably by those skilled in the art.

[0113] The preferred liquid polyol polyesters employed in this invention comprise certain polyols, especially sugars or sugar alcohols, esterified with at least four fatty acid groups. Accordingly, the polyol starting material must have at least four esterifiable hydroxyl groups. Examples of preferred polyols are sugars, including monosaccharaides and disaccharides, and sugar alcohols. Examples of monosaccharides containing four hydroxyl groups are xylose and arabinose and the sugar alcohol derived from xylose, which has five hydroxyl groups, i.e., xylitol. The monosaccharide, erythrose, is not suitable in the practice of this invention since it only contains three hydroxyl groups, but the sugar alcohol derived from erythrose, i.e., erythritol, contains four hydroxyl groups and accordingly can be used. Suitable five hydroxyl group-containing monosaccharides are galactose, fructose, and sorbose. Sugar alcohols containing six --OH groups derived from the hydrolysis products of sucrose, as well as glucose and sorbose, e.g., sorbitol, are also suitable. Examples of disaccharide polyols which can be used include maltose, lactose, and sucrose, all of which contain eight hydroxyl groups.

[0114] Preferred polyols for preparing the polyesters for use in the present invention are selected from the group consisting of erythritol, xylitol, sorbitol, glucose, and sucrose. Sucrose is especially preferred.

[0115] The polyol starting material having at least four hydroxyl groups is esterified on at least four of the --OH groups with a fatty acid containing from about 8 to about 22 carbon atoms. Examples of such fatty acids include caprylic, capric, lauric, myristic, myristoleic, palmitic, palmitoleic, stearic, oleic, ricinoleic, linoleic, linolenic, eleostearic, arachidic, arachidonic, behenic, and erucic acid. The fatty acids can be derived from naturally occurring or synthetic fatty acids; they can be saturated or unsaturated, including positional and geometrical isomers. However, in order to provide liquid polyesters preferred for use herein, at least about 50% by weight of the fatty acid incorporated into the polyester molecule should be unsaturated. Oleic and linoleic acids, and mixtures thereof, are especially preferred.

[0116] The polyol fatty acid polyesters useful in this invention should contain at least four fatty acid ester groups. It is not necessary that all of the hydroxyl groups of the polyol be esterified with fatty acid, but it is preferable that the polyester contain no more than two unesterified hydroxyl groups. Most preferably, substantially all of the hydroxyl groups of the polyol are esterified with fatty acid, i.e., the polyol moiety is substantially completely esterified. The fatty acids esterified to the polyol molecule can be the same or mixed, but as noted above, a substantial amount of the unsaturated acid ester groups must be present to provide liquidity.

[0117] To illustrate the above points, a sucrose fatty triester would not be suitable for use herein because it does not contain the required four fatty acid ester groups. A sucrose tetra-fatty acid ester would be suitable, but is not preferred because it has more than two unesterified hydroxyl groups. A sucrose hexa-fatty acid ester would be preferred because it has no more than two unesterified hydroxyl groups. Highly preferred compounds in which all the hydroxyl groups are esterified with fatty acids include the liquid sucrose octa-substituted fatty acid esters.

[0118] The following are non-limiting examples of specific polyol fatty acid polyesters containing at least four fatty acid ester groups suitable for use in the present invention: glucose tetraoleate, the glucose tetraesters of soybean oil fatty acids (unsaturated), the mannose tetraesters of mixed soybean oil fatty acids, the galactose tetraesters of oleic acid, the arabinose tetraesters of linoleic acid, xylose tetralinoleate, galactose pentaoleate, sorbitol tetraoleate, the sorbitol hexaesters of unsaturated soybean oil fatty acids, xylitol pentaoleate, sucrose tetraoleate, sucrose pentaoletate, sucrose hexaoleate, sucrose hepatoleate, sucrose octaoleate, and mixtures thereof.

[0119] As noted above, highly preferred polyol fatty acid esters are those wherein the fatty acids contain from about 14 to about 18 carbon atoms.

[0120] The preferred liquid polyol polyesters preferred for use herein have complete melting points below about 30.degree. C., preferably below about 27.5.degree. C., more preferably below about 25.degree. C. Complete melting points reported herein are measured by Differential Scanning Calorimetry (DSC).

[0121] The polyol fatty acid polyesters suitable for use herein can be prepared by a variety of methods well known to those skilled in the art. These methods include: transesterification of the polyol with methyl, ethyl or glycerol fatty acid esters using a variety of catalysts; acylation of the polyol with a fatty acid chloride; acylation of the polyol with a fatty acid anhydride; and acylation of the polyol with a fatty acid, per se. See U.S. Pat. No. 2,831,854; U.S. Pat. No. 4,005,196, to Jandacek, issued Jan. 25, 1977; U.S. Pat. No. 4,005,196, to Jandacek, issued Jan. 25, 1977.

[0122] The make-up compositions of the present invention can also comprise a particulate cross-linked hydrophobic acrylate or methacrylate copolymer. This copolymer is particularly valuable for reducing shine and controlling oil while helping to provide effective moisturization benefits. The cross-linked hydrophobic polymer is preferably in the form of a copolymer lattice with at least one active ingredient dispersed uniformly throughout and entrapped within the copolymer lattice. Alternatively, the hydrophobic polymer can take the form of a porous particle having a surface area (N.sub.2-BET) in the range from about 50 to 500, preferably 100 to 300 m.sup.2/g and having the active ingredient absorbed therein.

[0123] The cross-linked hydrophobic polymer when used herein is in an amount of from about 0.1% to about 10% by weight and is preferably incorporated in the external silicone-containing oil phase. The active ingredient can be one or more or a mixture of skin compatible oils, skin compatible humectants, emollients, moisturizing agents and sunscreens. The polymer material is in the form of a powder, the powder being a combined system of particles. The system of powder particles forms a lattice which includes unit particles of less than about one micron in average diameter, agglomerates of fused unit particles of sizes in the range of about 20 to 100 microns in average diameter and aggregates of clusters of fused agglomerates of sizes in the range of about 200 to 1,200 microns in average diameter.

[0124] The powder material of the present invention which can be employed as the carrier for the active ingredient can be broadly described as a cross-linked "post absorbed" hydrophobic polymer lattice. The powder preferably has entrapped and dispersed therein, an active which may be in the form of a solid, liquid or gas. The lattice is in particulate form and constitutes free flowing discrete solid particles when loaded with the active material. The

lattice may contain a predetermined quantity of the active material. The polymer has the structural formula: 5

[0125] where the ratio of x to y is 80:20, R' is --CH.sub.2CH.sub.2-- and R" is --(CH.sub.2).sub.11CH.sub.3.

[0126] A suitable hydrophobic polymer for use herein is a highly crosslinked polymer, more particularly a highly cross-linked polymethacrylate copolymer such as that manufactured by the Dow Corning Corporation, Midland. Mich., USA, and sold under the trademark POLYTRAP (RTM). It is an ultralight free-flowing white powder and the particles are capable of absorbing high levels of lipophilic liquids and some hydrophilic liquids while at the same time maintaining a free-flowing powder character. The powder structure consists of a lattice of unit particles less than one micron that are fused into agglomerates of 20 to 100 microns and the agglomerates are loosely clustered into macro-particles or aggregates of about 200 to about 1200 micron size. The polymer powder is capable of containing as much as four times its weight of fluids, emulsions, dispersions or melted solids.

[0127] Adsorption of actives onto the polymer powder can be accomplished using a stainless steel mixing bowl and a spoon, wherein the active is added to the powder and the spoon is used to gently fold the active into the polymer powder. Low viscosity fluids may be adsorbed by addition of the fluids to a sealable vessel containing the polymer and then tumbling the materials until a consistency is achieved. More elaborate blending equipment such as ribbon or twin cone blenders can also be employed. The preferred active ingredient for use herein is glycerine. Preferably, the weight ratio of humectant: carrier is from about 1:4 to about 3:1.

[0128] Also suitable as a highly cross-linked polymethacrylate copolymer is Microsponges 5640. This takes the form of generally spherical particles of cross-linked hydrophobic polymer having a pore size of from about 0.01 to about 0.05 .mu.m and a surface area of 200-300 m.sup.2/g. Again, it is preferably loaded with humectant in the levels described above.

[0129] The compositions of the invention can also contain a hydrophilic gelling agent at a level preferably from about 0.01% to about 10%, more preferably from about 0.02% to about 2%, and especially from about 0.02% to about 0.5%. The gelling agent preferably has a viscosity (1% aqueous solution, 20.degree. C., Brookfield RVT) of at least about 4000 mPa.s, more preferably at least about 10,000 mPa.s and especially at least 50,000 mPa.s.

[0130] Suitable hydrophilic gelling agents can generally be described as water-soluble or colloidally water-soluble polymers, and include cellulose ethers (e.g. hydroxyethyl cellulose, methyl-cellulose, hydroxypropylmethyl cellulose), polyvinylalcohol, polyquatemium-10, guar gum, hydroxypropyl guar gum and xanthan gum.

[0131] Among suitable hydrophilic gelling agents are acrylic acid/alkyl acrylate copolymers and the carboxyvinyl polymers sold by the B. F. Goodrich Company under the trade mark of Carbopol resins. These resins consist essentially of a colloidally water-soluble polyalkenyl polyether crosslinked polymer of acrylic acid crosslinked with from 0.75% to 2.00% of a crosslinking agent such as for example polyallyl sucrose or polyallyl pentaerythritol. Examples include Carbopol 934, Carbopol 940, Carbopol 950, Carbopol 980, Carbopol 951 and Carbopol 981. Carbopol 934 is a water-soluble polymer of acrylic acid crosslinked with about 1% of a polyallyl ether of sucrose having an average of about 5.8 allyl groups for each sucrose molecule. Also suitable for use herein are hydrophobically-modified cross-linked polymers of acrylic acid having amphipathic properties available under the Trade Name Carbopol 1382, Carbopol 1342 and Pemulen TR-1 (CTFA Designation: Acrylates/10-30 Alkyl Acrylate Crosspolymer). A combination of the polyalkenyl polyether cross-linked acrylic acid polymer and the hydrophobically modified cross-linked acrylic acid polymer is also suitable for use herein. Other suitable gelling agents suitable for use herein are oleogels such as trihydroxystearin and aluminium magnesium

hydroxy stearate. The gelling agents herein are particularly valuable for providing excellent stability characteristics over both normal and elevated temperatures.

[0132] Preferably the acidic group containing hydrophilic gelling agents are neutralized. Neutralizing agents suitable for use in neutralizing acidic group containing hydrophilic gelling agents herein include sodium hydroxide, potassium hydroxide, ammonium hydroxide, monoethanolamine, diethanolamine and triethanolamine.

[0133] The make-up compositions herein can additionally comprise an emollient. Emollients suitable for the compositions of the present invention include natural and synthetic oils selected from mineral, vegetable, and animal oils, fats and waxes, fatty acid esters, fatty alcohols, alkylene glycol and polyalkylene glycol ethers and esters, fatty acids and mixtures thereof.

[0134] Suitable emollients for use herein include, for example, optionally hydroxy-substituted C.sub.8-C.sub.50 unsaturated fatty acids and esters thereof, C.sub.1-C.sub.24 esters of C.sub.8-C.sub.30 saturated fatty acids such as isopropyl myristate, cetyl palmitate and octyldodecylmyristate (Wickenol 142), beeswax, saturated and unsaturated fatty alcohols such as behenyl alcohol and cetyl alcohol, hydrocarbons such as mineral oils, petrolatum and squalane, fatty sorbitan esters (see U.S. Pat. No. 3988255, Seiden, issued Oct. 26, 1976), lanolin and lanolin derivatives, such as lanolin alcohol ethoxylated, hydroxylated and acetylated lanolins, cholesterol and derivatives thereof, animal and vegetable triglycerides such as almond oil, peanut oil, wheat germ oil, linseed oil, jojoba oil, oil of apricot pits, walnuts, palm nuts, pistachio nuts, sesame seeds, rapeseed, cade oil, corn oil, peach pit oil, poppyseed oil, pine oil, castor oil, soybean oil, avocado oil, safflower oil, coconut oil, hazelnut oil, olive oil, grapeseed oil, and sunflower seed oil and C.sub.1-C.sub.24 esters of dimer and trimer acids such as diisopropyl dimerate, diisostearylmalate, diisostearyldimerate and triisostearyltrimerate.

[0135] Preferred emollients are selected from hydrocarbons such as isohexadecane, mineral oils, petrolatum and squalane, lanolin alcohol, and stearyl alcohol. These emollients may be used independently or in mixtures and may be present in the composition of the present invention in an amount from about 1% to about 30% by weight, and preferably are present in an amount from about 5% to about 15% by weight of the total composition.

[0136] The composition may also contain additional materials such as, for example, fragrances, sun-screens, preservatives, electrolytes such as sodium chloride, proteins, antioxidants, chelating agents and water-in-oil emulsifiers as appropriate.

[0137] Another optional component of the make-up composition is one or more ultraviolet absorbing agents. Ultraviolet absorbing agents, often described as sunscreening agents, can be present in a concentration in the range of between about 1% and about 12% by weight, based on the total weight of composition. Preferably, the UV absorbing agents constitute between about 2% and 8% by weight. More preferably, the UV absorbing agents can be present in the composition in a concentration range of between about 4% and about 6% by weight. Of the ultraviolet absorbing agents suitable for use herein, benzophenone-3, octyl dimethyl PABA (Padimate O), Parsol MCX, and mixtures thereof are particularly preferred.

[0138] Another optional but preferred component herein is one or more additional chelating agents, preferably in the range of from about 0.02% to about 0.10% by weight, based on the total weight of the composition. Preferably, the chelating agent is present in a concentration in the range of between about 0.03% and about 0.07% by weight, based on the total weight of the composition. Among the chelating agents that may be included in the composition is tetrasodium EDTA.

[0139] Another optional but preferred component of the foundation composition

is one or more preservatives. The preservative concentration in the foundation composition, based on the total weight of that composition, is in the range of between about 0.05% and about 0.8% by weight, preferably between about 0.1% and about 0.3% by weight. Suitable preservatives for use herein include sodium benzoate and propyl paraben, and mixtures thereof.

[0140] Another optional but preferred component is DryFlow supplied by Dow Corning Ltd, Avco House, Castle Street, Reading RG1 7DZ, UK.

[0141] The pH of the cosmetic compositions herein is preferably about 5 or less, more preferably about 4 or less and especially about 3.

[0142] The cosmetic compositions of the present invention can be in the form of foundations, blushers, concealers, compact powders, moisturising creams and lotions, tinted moisturising creams and lotions, and the like, preferably as foundations and concealers.

[0143] The table below shows examples of cosmetic compositions of the present invention.

1 1 2 3 4 5 6 7 8 (%, (%, (%, (%, (%, (%, (%, (%, w/w) w/w) w/w) w/w) w/w) w/w) w/w) w/w) Phase A Cyclomethicone(DC 2-1330) 0.0 0.0 7.59 16.75 5.25 11.99 0.0 0.0 Cyclomethicone DC245 9.85 8.65 0.0 0.0 0.0 0.0 10.04 10.04 Cyclomethicone/Dimethicone 0.0 0.0 17.20 10.00 18.50 10.00 0.0 0.0 Copolyol (90:10) (DC3225C) Cyclomethicone/Dimethicone 10.00 15.00 0.0 0.0 0.0 0.0 15.00 15.00 Copolyol (90:10) (BY22-008) SEFA Cottonate.sup.1 0.00 0.00 2.00 0.00 2.00 4.00 0.00 0.00 Phase B Microsponge 5640.sup.2 0.5 0.75 0.75 0.00 0.50 0.75 0.75 0.75 Mica 0.00 0.00 0.00 0.10 0.10 0.10 0.00 0.00 Titanium Dioxide (Cardre 70429).sup.3 8.25 8.25 8.25 8.25 8.25 8.25 8.25 8.25 Zinc Oxide & Dimethicone 0.00 0.00 4.00 4.00 0.00 4.00 0.00 0.00 Phase C Dryflow.sup.4 2.5 2.50 0.00 0.00 0.00 0.00 2.5 2.5 Phase D Yellow Iron Oxide 2.10 2.10 2.00 2.10 2.10 2.10 1.60 1.60 Red Iron Oxide 0.90 0.90 0.24 0.90 0.60 0.90 0.47 0.47 Black Iron oxide 0.60 0.60 0.12 0.60 0.30 0.60 0.09 0.09 Cyclomethicone(DC 2-1330) 0.0 0.0 1.00 1.00 1.00 1.00 0.0 0.0 Cyclomethicone DC245 1.00 1.00 0.0 0.0 0.0 0.0 1.00 1.00 Phase E Durachem.sup.5 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Waxenol.sup.6 0.00 0.00 0.30 0.00 0.00 0.00 0.00 0.00 Phase F Cyclomethicone(DC2-1330) 0.0 0.0 1.00 1.00 1.00 1.00 0.0 0.0 Cyclomethicone DC245 1.00 1.00 0.0 0.0 0.0 0.0 1.00 1.00 Thixin R.sup.7 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 Propyl Paraben 0.00 0.00 0.25 0.00 0.00 0.00 0.00 0.00 Phase G Ethylene Brassylate 0.00 0.00 0.00 0.00 0.10 0.00 0.00 0.00 Phase H Salicylic Acid 1.00 0.5 1.75 1.95 1.50 1.50 1.00 1.50 Hydroxy propyl .beta. cyclodextrin.sup.10 8.00 4.00 8.00 8.00 12.00 8.00 4.00 8.00 Procetyl AWS.sup.11 0.00 0.00 0.00 0.00 0.00 0.00 3.00 3.00 Glycerine 6.00 6.00 6.00 6.00 6.00 6.00 6.00 6.00 Water 2.00 2.00 2.00 2.00 2.00 2.00 0.00 0.00 Phase I Water To 100 Na4EDTA 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 Sodium Citrate 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 Sodium Chloride 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 Citric Acid 0.5 1.00 0.00 0.00 0.50 0.00 0.50 0.50 Polyvinylpyrrolidone(Luviskol K17).sup.8 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Methyl Paraben 0.00 0.00 0.20 0.00 0.00 0.00 0.00 0.00 Phase J Zinc Oxide 0.00 0.00 0.42 0.42 0.00 0.28 0.00 0.00 Arginine.sup.12 0.00 0.00 0.325 0.65 0.65 0.65 0.00 0.00 Total: 100 100 100 100 100 100 100 100 .sup.1Supplied by Procter & Gamble .sup.2Supplied by Dow Corning Ltd, Avco House, Castle Street, Reading RG1 7DZ, UK .sup.3Supplied by Cardre Incorporated, 70 Tyler Pl., South Plainfield, NJ 07090, USA .sup.4Supplied by Dow Corning Ltd, Avco House, Castle Street, Reading RG1 7DZ, UK .sup.5Supplied by Astor-Stag Ltd., Tavistock Road, Wets Drayton, Middlesex UB7 7RA, UK .sup.6Supplied by Caschem Inc., 40 Avenue A, Bayonne, NJ 07002, USA .sup.7Trihydroxystearin, supplied by Rheox Ltd, Barons Court, Manchester Road, Wilmslow, SK9 1BQ, UK .sup.8Supplied by BASF, Earl Road, Cheadle Hulme, Cheadle, Cheshire, SK8 6QB .sup.9Supplied by Union Carbide, 39 Old Ridgebury Road, Danbury .sup.10Supplied by Cerestar USA Inc., 1100 Indianapolis Boulevard, Hammond, Indiana, USA 46320 .sup.11Supplied by Croda Chemicals Ltd., Cowick Hall, Snaith, Goole, North Humberside, DN14 9AA .sup.12Supplied by Degussa Ltd, Winterton House, Winterton Way, Macclesfield, Cheshire SK11 0LP

[0144] The formulations of Examples I to VI can be prepared as follows. The various components listed in the Table have been segregated into groups, the constituents of each group being mixed together before being added to members of the remaining groups in accordance with the procedures set forth below.

[0145] In the first step, the mixture of components of phase A is stirred for approximately 15 minutes with shear mixing until homogeneous. With high speed shear mixing, the materials of phase B are added gradually to A and the batch is mixed for about 30 minutes. Phase C is added and the resulting mixture is ground for approximately 15 minutes.

[0146] The components from phase D are then added and the resulting mixture is ground until fully dispersed.

[0147] The waxy phase E is then added to the batch and the batch is heated to 85.degree. C. with mixing until the waxes have melted and then cooled to 50.degree. C. with stirring. Phase F premix is then added to the batch and homogenised for 10 minutes. The batch is cooled to room temperature with stirring. Phase G is added to the batch and homogenised for 10 minutes.

[0148] The water phase is prepared as follows. The components of phase I are mixed until dissolved. The components of phase H are mixed together under high speed shear until dissolved. The solution is mixed until clear. Phase I is added to phase H and mixed, followed by addition of phase J under mixing.

[0149] The water phase is finally added to the oil phase slowly whilst homogenising at a low speed, with stirring. When all of the water phase has been added, high shear is applied to the batch for approximately 5 minutes to increase the viscosity of the final product.

[0150] The resulting make-up composition is ready for packaging.

[0151] The cosmetic compositions of the Examples exhibit improved anti-acne/anti-inflammatory activity and reduced skin irritation.

CLAIMS:

What is claimed is:

1. Cosmetic composition for topical application to the skin comprising a hydroxyalkyl cyclodextrin, salicylic acid or salicylic acid derivative, and water.

2. Cosmetic composition according to claim 1 comprising salicylic acid.

3. Cosmetic composition according to claim 1 or 2 comprising from about 0.1% to about 10%, preferably from about 0.1% to about 5%, by weight, of salicylic acid or salicylic acid derivative.

4. Cosmetic composition according to any of claims 1 to 3 comprising from about 0.1% to about 20%, preferably from about 0.8% to about 15%, by weight, of hydroxyalkyl cyclodextrin.

5. Cosmetic composition according to any of claims 1 to 4 wherein the hydroxyalkyl cyclodextrin is a hydroxy (C1-C4 alkyl) cyclodextrin, preferably hydroxypropyl-beta-cyclodextrin.

6. Cosmetic composition according to any of claims 1 to 5 wherein the composition is in the form of an emulsion comprising at least one aqueous phase and at least one oil phase, preferably a water-in-oil emulsion.

7. Cosmetic composition according to any of claims 1 to 6 wherein the salicylic acid or salicylic acid derivative is solubilised in the aqueous phase.

8. Cosmetic composition according to any of claims 1 to 7 additionally

comprising from about 0.1% to about 30%, preferably from about 0.1% to about 25%, more preferably from about 1% to about 15%, by weight, of pigment.

9. Cosmetic composition according to any of claims 1 to 8 wherein the oil phase comprises from about 0.01% to about 25%, by weight of the oil phase, of non-volatile silicones and from about 75% to about 99.99%, by weight of the oil phase, of volatile silicones.

L14: Entry 339 of 477 File: USPT Jun 9, 1992

DOCUMENT-IDENTIFIER: US 5120697 A
TITLE: Alkoxylation using modified calcium-containing catalysts

Detailed Description Text (91):
Among the most commercially important alkoxylation products are those which utilize water or an alcohol (monols, glycols, polyols, etc.) as starter (initiator) and ethylene oxide, propylene oxide, or an ethylene oxide/propylene oxide mixture as the 1,2-alkylene oxide monomer. Such alcohol ethoxylates encompass a myriad of structures, compositions and molecular weights intended for service in a diversity of applications ranging from heavy duty industrial end uses such as solvents and functional fluids to ultra-sophisticated, consumer-oriented end uses such as in pharmaceutical, personal care and household goods. The calcium-containing catalysts of the instant invention find utility in the manufacture of a broad range of alkoxylation products, but are particularly useful in the manufacture of alkoxylates designed for service in sophisticated, consumer-oriented end use areas of application where product quality demands are stringent. Among the many types of alkoxylates which are used in such applications, two of the most prominent are the poly(oxyethylene)glycols and the fatty alcohol under such tradenames as CARBOWAX.RTM., POLYGLYCOL E.RTM., PLURACOL E.RTM., etc., are manufactured by ethoxylation of ethylene glycol or one of its homologues; they are produced over a molecular weight range of about 200 to about 8,000. The fatty alcohol ethoxylates, known under such non-ionic surfactant tradenames as NEODOL.RTM., ALFONIC.RTM., TERGITOL.RTM., etc., are manufactured by ethoxylation of linear or branched C.sub.10 --C.sub.16 saturated alcohols; they are produced over a molecular weight range of about 300 to about 800. It is in the production of these and other performance type, premium quality ethoxylates that the calcium-containing catalysts of the instant invention offer maximum advantages relative to the usual homogeneous ethoxylation catalysts (NaOH, KOH, etc.).

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L14: Entry 2 of 477 File: PGPB Jul 24, 2003

DOCUMENT-IDENTIFIER: US 20030139317 A1
TITLE: Surfactant mixture with fatty alcohol alkoxylates made fron vegetable raw materials

Summary of Invention Paragraph (23):
[0019] The fatty alcohols are used in the form of their alkoxylates which are obtained by reaction with 1 to 50 mol, preferably 2 to 35 mol and more particularly 3 to 25 mol of 1,2-epoxyalkanes CH.sub.2OCHR.sup.2, where R.sup.2 is hydrogen or a methyl or ethyl group. Fatty alcohol ethoxylates (R.sup.2=hydrogen) obtained by reaction with 1 to 50 mol, preferably 2 to 35 mol and more particularly 3 to 25 mol of ethylene oxide are preferably used. Fatty alcohol ethoxylates with a degree of ethoxylation of 50 to 60% by weight ethylene oxide are particularly preferred. The alkoxylation is carried out in the presence of catalysts, preferably alkaline catalysts, such as sodium methanolate, sodium hydroxide and potassium hydroxide.

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Search Results - Record(s) 41 through 60 of 104 returned.

☐ 41. Document ID: US 5759208 A

L18: Entry 41 of 104 File: USPT Jun 2, 1998

US-PAT-NO: 5759208
DOCUMENT-IDENTIFIER: US 5759208 A

TITLE: Laundry detergent compositions containing silicone emulsions

DATE-ISSUED: June 2, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zhen; Yueqian	West Chester	OH	N/A	N/A
Strickland; Wilbur Cecil	Cincinnati	OH	N/A	N/A

US-CL-CURRENT: 8/137; 134/25.4, 134/42, 510/337, 510/347, 510/417, 510/466, 510/515, 510/516, 510/517

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 42. Document ID: US 5744155 A

L18: Entry 42 of 104 File: USPT Apr 28, 1998

US-PAT-NO: 5744155
DOCUMENT-IDENTIFIER: US 5744155 A

TITLE: Bioadhesive emulsion preparations for enhanced drug delivery

DATE-ISSUED: April 28, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Friedman; Doron	Carmei Yosef	N/A	N/A	ILX
Schwartz; Joseph	Rehovot	N/A	N/A	ILX
Amselem; Shimon	Rehovot	N/A	N/A	ILX

US-CL-CURRENT: 424/434; 424/435, 424/436, 424/450, 514/937, 514/938

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 43. Document ID: US 5728690 A

L18: Entry 43 of 104 File: USPT Mar 17, 1998

US-PAT-NO: 5728690
DOCUMENT-IDENTIFIER: US 5728690 A

TITLE: Clear non-alcoholic hydrocortisone solutions

DATE-ISSUED: March 17, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chen; Gloria Yoshiko	Hammonton	NJ	N/A	N/A

US-CL-CURRENT: 514/179; 424/78.05, 514/400, 514/424, 514/952, 514/970, 514/973, 514/975

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

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☐ 44. Document ID: US 5723482 A

L18: Entry 44 of 104 File: USPT Mar 3, 1998

US-PAT-NO: 5723482
DOCUMENT-IDENTIFIER: US 5723482 A

TITLE: Active compounds and cosmetic and dermatological formulations

DATE-ISSUED: March 3, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Degwert; Joachim	Tostedt	N/A	N/A	DEX
Sauermann; Gerhard	Wiemersdorf	N/A	N/A	DEX
Schreiner; Volkner	Hamburg	N/A	N/A	DEX
Stab; Franz	Echem	N/A	N/A	DEX

US-CL-CURRENT: 514/399; 106/436, 424/400, 424/401, 424/404, 424/59, 424/60, 512/1, 512/2, 514/400

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 45. Document ID: US 5723426 A

L18: Entry 45 of 104 File: USPT Mar 3, 1998

US-PAT-NO: 5723426
DOCUMENT-IDENTIFIER: US 5723426 A

TITLE: Liquid laundry detergent compositions containing surfactants and silicone emulsions

DATE-ISSUED: March 3, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zhen; Yueqian	Cincinnati	OH	45217-1087	N/A
Strickland; Wilbur Cecil	Cincinnati	OH	45217-1087	N/A
McWilliams; Linda Carol	Cincinnati	OH	45217-1087	N/A

US-CL-CURRENT: 510/337; 510/417, 510/433, 510/466

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 46. Document ID: US 5707649 A

L18: Entry 46 of 104 File: USPT Jan 13, 1998

US-PAT-NO: 5707649
DOCUMENT-IDENTIFIER: US 5707649 A

TITLE: Agent for treating neuronal diseases

DATE-ISSUED: January 13, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Inokuchi; Jinichi	Kodaira	N/A	N/A	JPX
Usuki; Seigou	Nakano-Ku	N/A	N/A	JPX

US-CL-CURRENT: 424/450; 424/422, 424/489

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 47. Document ID: US 5700478 A

L18: Entry 47 of 104 File: USPT Dec 23, 1997

US-PAT-NO: 5700478
DOCUMENT-IDENTIFIER: US 5700478 A

TITLE: Water-soluble pressure-sensitive mucoadhesive and devices provided therewith for emplacement in a mucosa-lined body cavity

DATE-ISSUED: December 23, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Biegajski; James E.	Foster City	CA	N/A	N/A
Venkatraman; Subbu S.	Palo Alto	CA	N/A	N/A
Scott; Ann M.	Mountain View	CA	N/A	N/A

US-CL-CURRENT: 424/434; 424/430, 424/435, 424/436, 424/437, 424/443, 514/772.3, 514/777, 514/778, 514/780, 514/781, 514/782

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 48. Document ID: US 5695784 A

L18: Entry 48 of 104 File: USPT Dec 9, 1997

US-PAT-NO: 5695784
DOCUMENT-IDENTIFIER: US 5695784 A

TITLE: Flavor-masked pharmaceutical compositions

DATE-ISSUED: December 9, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pollinger; Norbert	Odenthal	N/A	N/A	DEX
Michaelis; Johannes	Cologne	N/A	N/A	DEX
Benke; Klaus	Kyoto	N/A	N/A	JPX
Rupp; Roland	Leichlingen	N/A	N/A	DEX
Bucheler; Manfred	Overath	N/A	N/A	DEX

US-CL-CURRENT: 424/495; 424/489, 424/494, 424/497

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 49. Document ID: US 5688510 A

L18: Entry 49 of 104 File: USPT Nov 18, 1997

US-PAT-NO: 5688510
DOCUMENT-IDENTIFIER: US 5688510 A

TITLE: Process for producing stable medicinal composition, and pharmaceutical preparation

DATE-ISSUED: November 18, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nakamichi; Kouichi	Shiga	N/A	N/A	JPX
Izumi; Shougo	Kyoto	N/A	N/A	JPX
Yasuura; Hiroyuki	Shiga	N/A	N/A	JPX

US-CL-CURRENT: 424/736; 424/43, 424/46, 424/47, 424/483, 424/484, 424/485, 424/486, 424/487, 424/488, 424/489, 424/490, 424/491, 424/492, 424/493, 424/494, 424/495, 424/496, 424/497, 424/498, 424/739, 424/745

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 50. Document ID: US 5670471 A

L18: Entry 50 of 104 File: USPT Sep 23, 1997

US-PAT-NO: 5670471
DOCUMENT-IDENTIFIER: US 5670471 A

TITLE: Concentrate comprising alkylglycoside mixture and fatty alcohol and corresponding methods of use

DATE-ISSUED: September 23, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Amalric; Chantal	Blan	N/A	N/A	FRX
Lecocu-Michel; Nelly	Maisons-Alfort	N/A	N/A	FRX

US-CL-CURRENT: 510/416; 424/70.31, 510/119, 510/135, 510/136, 510/137, 510/151, 510/152, 510/155, 510/158, 510/159, 510/417, 510/470, 510/505, 510/535, 514/846

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 51. Document ID: US 5653970 A

L18: Entry 51 of 104 File: USPT Aug 5, 1997

US-PAT-NO: 5653970
DOCUMENT-IDENTIFIER: US 5653970 A

TITLE: Personal product compositions comprising heteroatom containing alkyl aldonamide compounds

DATE-ISSUED: August 5, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vermeer; Robert	Nutley	NJ	N/A	N/A

US-CL-CURRENT: 424/70.24; 424/70.1, 510/126, 510/135, 514/847

Full | Title | Citation | Front | Review | Classification | Date | Reference KWIC | Draw Desc | Image

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☐ 52. Document ID: US 5622690 A

L18: Entry 52 of 104 File: USPT Apr 22, 1997

US-PAT-NO: 5622690
DOCUMENT-IDENTIFIER: US 5622690 A

TITLE: Seed-derived proteinaceous compositions for reduction of sunburn cell formation

DATE-ISSUED: April 22, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Potter; Richard	Seeley Lake	MT	N/A	N/A
Pugliese; Peter T.	Bernville	PA	N/A	N/A

US-CL-CURRENT: 424/59; 424/401

Full | Title | Citation | Front | Review | Classification | Date | Reference KWIC | Draw Desc | Image

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☐ 53. Document ID: US 5620680 A

L18: Entry 53 of 104 File: USPT Apr 15, 1997

US-PAT-NO: 5620680
DOCUMENT-IDENTIFIER: US 5620680 A

TITLE: Cosmetic and dermatological light protection formulations having an active content of cis-urocaninic acid

DATE-ISSUED: April 15, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stab; Franz	Echem	N/A	N/A	DEX
Sauermann; Gerhard	Wiemersdorf	N/A	N/A	DEX
Uhlmann; Beate	Hamburg	N/A	N/A	DEX

US-CL-CURRENT: 424/59; 424/60, 424/70.1, 514/400, 514/938

Full | Title | Citation | Front | Review | Classification | Date | Reference | FWIC | Draw Desc | Image

☐ 54. Document ID: US 5514670 A

L18: Entry 54 of 104 File: USPT May 7, 1996

US-PAT-NO: 5514670
DOCUMENT-IDENTIFIER: US 5514670 A

TITLE: Submicron emulsions for delivery of peptides

DATE-ISSUED: May 7, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Friedman; Doron	Carmei Yosef	N/A	N/A	ILX
Schwarz; Joseph	Rehovot	N/A	N/A	ILX
Amselem; Shimon	Rehovot	N/A	N/A	ILX

US-CL-CURRENT: 514/2; 424/78.08, 424/78.31, 424/78.33, 514/11, 514/12, 514/13, 514/14, 514/15, 514/18, 514/19, 514/3, 514/8

Full | Title | Citation | Front | Review | Classification | Date | Reference | FWIC | Draw Desc | Image

☐ 55. Document ID: US 5496565 A

L18: Entry 55 of 104 File: USPT Mar 5, 1996

US-PAT-NO: 5496565
DOCUMENT-IDENTIFIER: US 5496565 A

TITLE: Microspherules

DATE-ISSUED: March 5, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Heinze; Friedrich	Frankfurt	N/A	N/A	DEX
Clasen; Martina	Hamburg	N/A	N/A	DEX

US-CL-CURRENT: 424/502; 424/401, 424/489, 424/59, 514/844, 514/919, 514/938, 514/944

Full | Title | Citation | Front | Review | Classification | Date | Reference | FWIC | Draw Desc | Image

☐ 56. Document ID: US 5474785 A

L18: Entry 56 of 104 File: USPT Dec 12, 1995

US-PAT-NO: 5474785
DOCUMENT-IDENTIFIER: US 5474785 A

TITLE: Delivery system comprising means for controlling internal pressure

DATE-ISSUED: December 12, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wright; Jeremy C.	Los Altos	CA	N/A	N/A
Eckenhoff; James B.	Los Altos	CA	N/A	N/A
Maruyama; Frederick H.	San Jose	CA	N/A	N/A
Peery; John R.	Stanford	CA	N/A	N/A

US-CL-CURRENT: 424/473; 424/438, 604/892.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 57. Document ID: US 5474775 A

L18: Entry 57 of 104 File: USPT Dec 12, 1995

US-PAT-NO: 5474775
DOCUMENT-IDENTIFIER: US 5474775 A

TITLE: Cosmetic compositions containing 2,3-butanediol fatty acid diesters

DATE-ISSUED: December 12, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Traitler; Helmut	Corseaux	N/A	N/A	CHX
Viret; Jean-Louis	Brent	N/A	N/A	CHX

US-CL-CURRENT: 424/401; 424/63, 424/70.11, 424/70.9

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 58. Document ID: US 5425938 A

L18: Entry 58 of 104 File: USPT Jun 20, 1995

US-PAT-NO: 5425938
DOCUMENT-IDENTIFIER: US 5425938 A

TITLE: Polyamino salts of alpha-hydroxyacids, alpha-ketoacids and related compounds

DATE-ISSUED: June 20, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Znaiden; Alexander P.	Trumbull	CT	N/A	N/A
Johnson; Anthony W.	Fairfield	CT	N/A	N/A
Crotty; Brian A.	Branford	CT	N/A	N/A

US-CL-CURRENT: 424/78.02; 424/401, 424/59, 424/64, 424/65, 424/70.1, 424/70.24, 424/78.31, 424/78.32, 424/78.37, 424/DIG.5, 514/557, 514/558, 514/559, 514/560, 514/568, 514/569, 514/570, 514/572, 514/574, 514/844, 514/845, 514/846, 514/847, 514/848, 514/880, 514/881, 514/944

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 59. Document ID: US 5352457 A

L18: Entry 59 of 104 File: USPT Oct 4, 1994

US-PAT-NO: 5352457
DOCUMENT-IDENTIFIER: US 5352457 A

TITLE: Transdermal device

DATE-ISSUED: October 4, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Jenkins; Anthony W.	Comberton	N/A	N/A	GBX

US-CL-CURRENT: 424/448; 424/449

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 60. Document ID: US 5318774 A

L18: Entry 60 of 104 File: USPT Jun 7, 1994

US-PAT-NO: 5318774
DOCUMENT-IDENTIFIER: US 5318774 A

TITLE: Composition and method for imparting an artificial tan to human skin

DATE-ISSUED: June 7, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Alban; Noelle C.	Hamden	CT	N/A	N/A
Deckner; George E.	Trumbull	CT	N/A	N/A

US-CL-CURRENT: 424/59; 424/60, 424/63, 514/938

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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L18: Entry 60 of 104 5352457 File: USPT Jun 7, 1994

DOCUMENT-IDENTIFIER: US 5318774 A
TITLE: Composition and method for imparting an artificial tan to human skin

DEPR:
An essential component of the oil phase of the compositions of the present invention is a fatty acid or fatty acid derivative. By the term fatty acid is meant any organic carboxylic acid from natural or synthetic sources having from about 10 or more carbon atoms. By the term fatty acid derivative is meant a material derived from a fatty acid such as an alcohol (i.e. fatty acid alcohol), ester (i.e. fatty acid ester), ether (i.e. fatty acid ether), and the like. Examples of fatty acid alcohols include the corresponding alcohols of the fatty acids described herein. Examples of fatty acid esters include fatty acids esterified with short chain (i.e. C1-C8 straight or branched chain) alcohols; short chain (i.e. C1-C8 straight or branched chain) acids esterified with fatty acid alcohols; fatty acids esterified with fatty acid alcohols; mono-, di-, and triglycerides of fatty acids; and ethoxylated and propoxylated derivatives of any of these esters (i.e. fatty acid esters incorporating variable numbers of ethylene glycol or propylene glycol units). Examples of fatty acid ethers include fatty acid alcohol ethers of short chain alcohols (i.e. C1-C8 straight or branched chain alcohols), fatty acid alcohol ethers of fatty acid alcohols, and ethoxylated and propoxylated fatty acid alcohol ethers.

DEPR:
Preferred for use in the compositions of the instant invention are fatty acid or fatty acid derivatives selected from the group consisting of C10 to C30 fatty acids; C10 to C30 fatty acid alcohols; C10 to C30 ethoxylated and propoxylated fatty acid alcohols; esters of C10 to C30 fatty acids with C1 to C30 alcohols; ethoxylated and propoxylated esters of C10 to C30 fatty acids with C1 to C30 alcohols; C10 to C30 mono-, di-, and triglycerides; C10 to C30 fatty acid ethers; ethoxylated and propoxylated C10 to C30 fatty acid ethers; and mixtures thereof.

DEPR:
The artifical tanning compositions of the instant invention can also contain one or more humectants/moisturizers. A variety of humectants/moisturizers can be employed and can be present at a level of from about 1% to about 30%, more preferably from about 2% to about 8% and most preferably from about 3% to about 5%. These materials include urea; guanidine; glycolic acid and glycolate salts (e.g. ammonium and quaternary alkyl ammonium); lactic acid and lactate salts (e.g. ammonium and quaternary alkyl ammonium); polyhydroxy alcohols such as sorbitol, glycerin, hexanetriol, propylene glycol, hexylene glycol and the like; polyethylene glycol; sugars and starches; sugar and starch derivatives (e.g. alkoxylated glucose); D-panthenol; hyaluronic acid; lactamide monoethanolamine; acetamide monoethanolamine; and mixtures thereof.

DEPR:
Examples of carboxylic acid copolymers useful in the present invention include Carbomer 934, Carbomer 941, Carbomer 950, Carbomer 951, Carbomer 954, Carbomer 980, Carbomer 981, Carbomer 1342, and Acrylates/C.sub.10-30 Alkyl Acrylate Cross Polymers (available as Carbopol.RTM. 934, Carbopol.RTM. 941, Carbopol.RTM. 950, Carbopol.RTM. 951, Carbopol.RTM. 954, Carbopol.RTM. 980, Carbopol.RTM. 981, Carbopol.RTM. 1342, and the Pemulen Series, respectively, from B.F. Goodrich).

DEPR:
The compositions of the present invention can optionally comprise additional emulsifiers and surfactants. Suitable emulsifiers can include, but are not limited to, polyethylene glycol 20 sorbitan monolaurate (Polysorbate 20), polyethylene glycol 5 soya sterol, polyethylene glycol 100 stearate, polyethylene glycol 20 stearyl ether, Polysorbate 80, cetyl phosphate, potassium cetyl phosphate, ethanolamine cetyl phosphate, diethanolamine cetyl phosphate, triethanolamine cetyl phosphate, and mixtures thereof. Examples of a broad variety of additional emulsifiers and surfactants useful herein are described in McCutcheon's, Detergents and Emulsifiers, North American Edition (1986), published by Allured Publishing Corporation, which is incorporated herein by reference in its entirety.

DETL:
_____ Ingredients % Weight
_____ Phase A Water qs 100 Cetyl Hydroxethylcellulose.sup.1 0.50 Disodium EDTA 0.030 Phase B PPG-15 Stearyl Ether 11.0 Dimethicone & Trimethylsiloxysilicate.sup.2 2.00 Dimethicone 1.00 Glyceryl Stearate 2.60 PVP/Eicosene Copolymer 0.80 Cetyl Alcohol 0.75 Stearyl Alcohol 0.50 Ceteareth-12 0.50 Ceteareth-20 0.50 Phase C Water 2.00 Butylene Glycol 2.00 DMDM Hydantoin (and) 0.20 Iodopropynyl Butylcarbamate Phase D Water 6.00 Dihydroxyacetone 3.00 Phase E Fragrance 1.00
_____ .sup.1 Available as Natrasol .RTM. CS Plus 330 Grade from Aqualon. .sup.2 Available as Dow Corning 593 Fluid.

DETL:
_____ Ingredients % Weight
_____ Phase A Water qs 100 Cetyl Hydroxethylcellulose.sup.1 0.50 Disodium EDTA 0.030 Phase B Octyl Methoxycinnamate 7.50 Oxybenzone 2.50 Octocrylene 1.00 Dimethicone & Trimethylsiloxysilicate.sup.2 2.00 Dimethicone 1.00 Glyceryl Stearate 2.60 PVP/Eicosene Copolymer 0.80 Cetyl Alcohol 0.75 Stearyl Alcohol 0.50 Ceteareth-12 0.50 Ceteareth-20 0.50 Phase C Water 2.00 Butylene Glycol 2.00 DMDM Hydantoin (and) 0.20 Iodopropynyl Butylcarbamate Phase D Water 6.00 Dihydroxyacetone 3.00 Phase E Fragrance 1.00
_____ .sup.1 Available as Natrasol .RTM. CS Plus 330 Grade from Aqualon. .sup.2 Available as Dow Corning 593 Fluid.

DETL:
_____ Ingredients % Weight
_____ Phase A Water qs 100 Cetyl Hydroxethylcellulose.sup.1 0.50 Disodium EDTA 0.030 Phase B Octyl Methoxycinnamate 3.00 Octyl Salicylate 0.50 PPG-15 Stearyl Ether 4.00 Dimethicone & Trimethylsiloxysilicate 2.00 Dimethicone 1.00 Glyceryl Stearate 2.60 PVP/Eicosene Copolymer 0.80 Cetyl Alcohol 0.75 Stearyl Alcohol 0.50 Ceteareth-12 0.50 Ceteareth-20 0.50 Phase C Water 2.00 Butylene Glycol 2.00 DMDM Hydantoin (and) 0.20 Iodopropynyl Butylcarbamate Phase D Water 6.00 Dihydroxyacetone 3.00 Phase E Fragrance 1.00
_____ .sup.1 Available as Natrasol .RTM. CS Plus 330 Grade from Aqualon. .sup.2 Available as Dow Corning 593 Fluid.

DETL:
_____ Ingredients % Weight
_____ Phase A Water qs 100 Glycerin 3.00 Cetyl Hydroxethylcellulose.sup.1 0.50 Disodium EDTA 0.030 Phase B Octyl Methoxycinnamate 7.50 Oxybenzone 2.50 Octocrylene 1.00 Dimethicone & Trimethylsiloxysilicate.sup.2 2.00 Dimethicone 1.00 Glyceryl Stearate 2.60 PVP/Eicosene Copolymer 0.80 Cetyl Alcohol 0.75 Stearyl Alcohol 0.50 Ceteareth-12 0.50 Ceteareth-20 0.50 Phase C Water 2.00 Butylene Glycol 2.00 DMDM Hydantoin (and) 0.20 Iodopropynyl Butylcarbamate Phase D Water 6.00 Dihydroxyacetone 3.00 Phase E Fragrance 1.00
_____ .sup.1 Available as Natrasol .RTM. CS Plus 330 Grade from Aqualon. .sup.2 Available as Dow Corning 593 Fluid.

CLPR:
13. The composition according to claim 12 wherein said fatty acid, fatty acid alcohol, fatty acid ester, or fatty acid ether is selected from the group consisting of C10 to C30 fatty acids; C10 to C30 fatty acid alcohols; C10 to C30 ethoxylated and propoxylated fatty acid alcohols; esters of C10 to C30 fatty acids with C1 to C30 alcohols; ethoxylated and propoxylated esters of C10 to C30 fatty acids with C1 to C30 alcohols; C10 to C30 mono-, di-, and triglycerides; C10 to C30 fatty acid ethers; ethoxylated and propoxylated C10 to C30 fatty acid ethers; and mixtures thereof.

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☐ 1. Document ID: US 5662932 A

L11: Entry 1 of 4 File: USPT Sep 2, 1997

US-PAT-NO: 5662932
DOCUMENT-IDENTIFIER: US 5662932 A

TITLE: Solid fat nanoemulsions

DATE-ISSUED: September 2, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Amselem; Shimon	Rehovot	N/A	N/A	ILX
Friedman; Doron	Carmei Yosef	N/A	N/A	ILX

US-CL-CURRENT: 424/450; 424/45, 424/489, 424/490, 424/502, 428/402.2, 514/937

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 2. Document ID: US 5576016 A

L11: Entry 2 of 4 File: USPT Nov 19, 1996

US-PAT-NO: 5576016
DOCUMENT-IDENTIFIER: US 5576016 A

TITLE: Solid fat nanoemulsions as drug delivery vehicles

DATE-ISSUED: November 19, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Amselem; Shimon	Rehovot	N/A	N/A	ILX
Friedman; Doron	Carmei Yosef	N/A	N/A	ILX

US-CL-CURRENT: 424/450; 424/489, 424/490, 424/502, 428/402.2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 3. Document ID: US 5266346 A

L11: Entry 3 of 4 File: USPT Nov 30, 1993

US-PAT-NO: 5266346
DOCUMENT-IDENTIFIER: US 5266346 A

TITLE: Extended ester derivatives as low calorie fat mimetics

DATE-ISSUED: November 30, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Klemann; Lawrence P.	Somerville	NJ	N/A	N/A
Finley; John W.	Whippany	NJ	N/A	N/A
Scimone; Anthony	Cedar Grove	NJ	N/A	N/A

US-CL-CURRENT: 426/611; 426/566, 426/804

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 4. Document ID: US 5104674 A

L11: Entry 4 of 4 File: USPT Apr 14, 1992

US-PAT-NO: 5104674
DOCUMENT-IDENTIFIER: US 5104674 A

TITLE: Microfragmented ionic polysaccharide/protein complex dispersions

DATE-ISSUED: April 14, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chen; Wehn-Sherng	Glenview	IL	N/A	N/A
Henry; George A.	Wilmette	IL	N/A	N/A
Gaud; Susan M.	Evanston	IL	N/A	N/A
Miller; Mark S.	Arlington Heights	IL	N/A	N/A
Kaiser; John M.	Glenview	IL	N/A	N/A
Balmaceda; Estela A.	Winnetka	IL	N/A	N/A
Morgan; Ronnie G.	Northbrook	IL	N/A	N/A
Baer; Cynthia C.	Arlington Heights	IL	N/A	N/A
Borwankar; Rajendra P.	Elmhurst	IL	N/A	N/A
Hellgeth; Lorraine C.	Chicago	IL	N/A	N/A
Strandholm; John J.	Morton Grove	IL	N/A	N/A
Hasenhuettl; Gerard L.	Highland Park	IL	N/A	N/A
Kerwin; Phillip J.	Wilmette	IL	N/A	N/A
Chen; Chyi-Cheng	Morton Grove	IL	N/A	N/A
Kratochvil; John F.	Oak Brook	IL	N/A	N/A
Lloyd; Wennie L.	Marengo	OH	N/A	N/A
Eckhardt; Gerard	Bay Shore	NY	N/A	N/A
De Vito; Adam P.	Chicago	IL	N/A	N/A
Heth; Alice A.	Evanston	IL	N/A	N/A

US-CL-CURRENT: 426/573; 426/496, 426/565, 426/575, 426/576, 426/577, 426/589, 426/602, 426/610, 426/611, 426/613, 426/653, 426/656, 426/657, 426/658

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 1. Document ID: US 6210742 B1

L14: Entry 1 of 22 File: USPT Apr 3, 2001

US-PAT-NO: 6210742
DOCUMENT-IDENTIFIER: US 6210742 B1

TITLE: Uses of oil bodies

DATE-ISSUED: April 3, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Deckers; Harm M	Calgary	N/A	N/A	CAX
van Rooijen; Gijs	Calgary	N/A	N/A	CAX
Boothe; Joseph	Calgary	N/A	N/A	CAX
Goll; Janis	Calgary	N/A	N/A	CAX
Mahmoud; Soheil	Calgary	N/A	N/A	CAX
Moloney; Maurice M.	Calgary	N/A	N/A	CAX

US-CL-CURRENT: 426/630; 426/302, 426/602, 426/615, 426/635, 426/89, 516/53

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 2. Document ID: US 6183762 B1

L14: Entry 2 of 22 File: USPT Feb 6, 2001

US-PAT-NO: 6183762
DOCUMENT-IDENTIFIER: US 6183762 B1

TITLE: Oil body based personal care products

DATE-ISSUED: February 6, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Deckers; Harm M.	Calgary	N/A	N/A	CAX
van Rooijen; Gijs	Calgary	N/A	N/A	CAX
Boothe; Joseph	Calgary	N/A	N/A	CAX
Goll; Janis	Calgary	N/A	N/A	CAX
Moloney; Maurice M.	Calgary	N/A	N/A	CAX

US-CL-CURRENT: 424/401; 426/417, 426/601, 426/602, 426/605, 426/615, 426/629, 426/635, 426/805, 514/937, 516/53

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 3. Document ID: US 6146645 A

L14: Entry 3 of 22 File: USPT Nov 14, 2000

US-PAT-NO: 6146645
DOCUMENT-IDENTIFIER: US 6146645 A

TITLE: Uses of oil bodies

DATE-ISSUED: November 14, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Deckers; Harm M	Calgary	N/A	N/A	CAX
van Rooijen; Gijs	Calgary	N/A	N/A	CAX
Boothe; Joseph	Calgary	N/A	N/A	CAX
Goll; Janis	Calgary	N/A	N/A	CAX
Mahmoud; Soheil	Calgary	N/A	N/A	CAX
Moloney; Maurice M.	Calgary	N/A	N/A	CAX

US-CL-CURRENT: 424/401; 426/417, 426/601, 426/602, 426/605, 426/615, 426/629, 426/635, 426/805, 514/937, 516/53

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

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☑ 4. Document ID: US 6019962 A

L14: Entry 4 of 22 File: USPT Feb 1, 2000

US-PAT-NO: 6019962
DOCUMENT-IDENTIFIER: US 6019962 A

TITLE: Compositions and methods for improving cosmetic products

DATE-ISSUED: February 1, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rabe; Thomas Elliot	Baltimore	MD	N/A	N/A
Drechsler; Lee Ellen	Cincinnati	OH	N/A	N/A
Smith, III; Edward Dewey	Mason	OH	N/A	N/A
Dohmae; Terutomo	Yasu-gun	N/A	N/A	JPX
Hines; Christina M.	Houston	TX	N/A	N/A

US-CL-CURRENT: 424/64; 424/401, 424/63, 424/69, 424/DIG.5

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 5. Document ID: US 5910631 A

L14: Entry 5 of 22 File: USPT Jun 8, 1999

US-PAT-NO: 5910631
DOCUMENT-IDENTIFIER: US 5910631 A

TITLE: Middle chain-specific thioesterase genes from Cuphea lanceolata

DATE-ISSUED: June 8, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Topfer; Reinhard	Bergheim	N/A	N/A	DEX
Martini; Norbert	Cologne	N/A	N/A	DEX
Schell; Jozef	Cologne	N/A	N/A	DEX

US-CL-CURRENT: 800/298; 435/320.1, 435/419, 435/468, 435/469, 435/470, 536/23.2, 536/23.6, 800/281

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 6. Document ID: US 5885974 A

L14: Entry 6 of 22 File: USPT Mar 23, 1999

US-PAT-NO: 5885974
DOCUMENT-IDENTIFIER: US 5885974 A

TITLE: Therapeutic methods utilizing naturally derived bio-active complexes and delivery systems therefor

DATE-ISSUED: March 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Danielov; Michael M.	Rego Park	NY	11374	N/A

US-CL-CURRENT: 514/109; 514/103, 514/167, 514/171, 514/182, 514/305, 514/573, 514/724

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 7. Document ID: US 5723747 A

L14: Entry 7 of 22 File: USPT Mar 3, 1998

US-PAT-NO: 5723747
DOCUMENT-IDENTIFIER: US 5723747 A

TITLE: Wax esters in transformed plants

DATE-ISSUED: March 3, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lassner; Michael	Davis	CA	N/A	N/A
Metz; James George	Davis	CA	N/A	N/A

US-CL-CURRENT: 800/281; 435/419, 536/23.6, 800/298, 800/306

Full | Title | Citation | Front | Review | Classification | Date | Reference KWIC | Draw Desc | Image

☐ 8. Document ID: US 5679881 A

L14: Entry 8 of 22 File: USPT Oct 21, 1997

US-PAT-NO: 5679881
DOCUMENT-IDENTIFIER: US 5679881 A

TITLE: Nucleic acid sequences encoding a plant cytoplasmic protein involved in fatty acyl-CoA metabolism

DATE-ISSUED: October 21, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Metz; James George	Davis	CA	N/A	N/A
Lardizabal; Kathryn Dennis	Woodland	CA	N/A	N/A
Lassner; Michael	Davis	CA	N/A	N/A

US-CL-CURRENT: 800/298; 435/320.1, 435/419, 435/69.1, 536/23.6, 536/24.1, 536/24.5

Full | Title | Citation | Front | Review | Classification | Date | Reference KWIC | Draw Desc | Image

☐ 9. Document ID: US 5662953 A

L14: Entry 9 of 22 File: USPT Sep 2, 1997

US-PAT-NO: 5662953
DOCUMENT-IDENTIFIER: US 5662953 A

TITLE: Reduced calorie triglyceride mixtures

DATE-ISSUED: September 2, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wheeler; Edward L.	Fairfield	NJ	N/A	N/A
D'Amelia; Ronald P.	Hicksville	NY	N/A	N/A
Leveille; Gilbert A.	Denville	NJ	N/A	N/A
Otterburn; Michael S.	Randolph	NJ	N/A	N/A
Klemann; Lawrence P.	Somerville	NJ	N/A	N/A
Finley; John W.	Whippany	NJ	N/A	N/A
Roden; Allan D.	Nobelsville	IN	N/A	N/A
Chrysam; Michael M.	Blairstown	NJ	N/A	N/A
Pelloso; Turiddu A.	Carmel	IN	N/A	N/A
Given, Jr.; Peter S.	Glencoe	IL	N/A	N/A

US-CL-CURRENT: 426/2; 426/607, 426/804

Full | Title | Citation | Front | Review | Classification | Date | Reference KWIC | Draw Desc | Image

☐ 10. Document ID: US 5610040 A

L14: Entry 10 of 22 File: USPT Mar 11, 1997

US-PAT-NO: 5610040
DOCUMENT-IDENTIFIER: US 5610040 A

TITLE: Enzymatic synthesis of ceramides and hybrid ceramides

DATE-ISSUED: March 11, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Smeets; Jan W. H.	Vlaardingen	N/A	N/A	NLX
De Pater; Robertus M.	Delft	N/A	N/A	NLX
Lambers; Johannes W. J.	Pijnacker	N/A	N/A	NLX

US-CL-CURRENT: 435/129; 424/401, 424/61, 424/70.1, 435/101, 435/128, 435/134, 435/85, 514/844, 514/847, 536/18.6, 536/55.3

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 11. Document ID: US 5565232 A

L14: Entry 11 of 22 File: USPT Oct 15, 1996

US-PAT-NO: 5565232
DOCUMENT-IDENTIFIER: US 5565232 A

TITLE: Reduced calorie triglyceride mixtures

DATE-ISSUED: October 15, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wheeler; Edward L.	Fairfield	NJ	N/A	N/A
D'Amelia; Ronald P.	Hicksville	NY	N/A	N/A
Leveilla; Gilbert A.	Denville	NJ	N/A	N/A
Otterburn; Michael S.	Randolph	NJ	N/A	N/A
Klemann; Lawrence P.	Somerville	NJ	N/A	N/A
Finley; John W.	Whippany	NJ	N/A	N/A
Roden; Allan D.	Nobelsville	IN	N/A	N/A
Chrysam; Michael M.	Blairstown	NJ	N/A	N/A
Pelloso; Turiddu A.	Carmel	IN	N/A	N/A
Given, Jr.; Peter S.	Glencoe	IL	N/A	N/A

US-CL-CURRENT: 426/607; 426/660, 426/804

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 12. Document ID: US 5552174 A

L14: Entry 12 of 22 File: USPT Sep 3, 1996

US-PAT-NO: 5552174
DOCUMENT-IDENTIFIER: US 5552174 A

TITLE: Reduced calorie triglyceride mixtures

DATE-ISSUED: September 3, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wheeler; Edward L.	Fairfield	NJ	N/A	N/A
D'Amelia; Ronald P.	Hicksville	NY	N/A	N/A
Leveille; Gilbert A.	Denville	NJ	N/A	N/A
Otterburn; Michael S.	Randolph	NJ	N/A	N/A
Klemann; Lawrence P.	Somerville	NJ	N/A	N/A
Finley; John W.	Whippany	NJ	N/A	N/A
Roden; Allan D.	Nobelsville	IN	N/A	N/A
Chrysam; Michael M.	Blairstown	NJ	N/A	N/A
Pelloso; Turiddu A.	Carmel	IN	N/A	N/A
Given, Jr,; Peter S.	Glencoe	IL	N/A	N/A

US-CL-CURRENT: 426/607; 426/804

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 13. Document ID: US 5507790 A

L14: Entry 13 of 22 File: USPT Apr 16, 1996

US-PAT-NO: 5507790
DOCUMENT-IDENTIFIER: US 5507790 A

TITLE: Method of non-invasive reduction of human site-specific subcutaneous fat tissue deposits by accelerated lipolysis metabolism

DATE-ISSUED: April 16, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; William V.	Toronto, Ontario	N/A	N/A	CAX

US-CL-CURRENT: 607/100; 128/897, 600/2

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 14. Document ID: US 5456939 A

L14: Entry 14 of 22 File: USPT Oct 10, 1995

US-PAT-NO: 5456939
DOCUMENT-IDENTIFIER: US 5456939 A

TITLE: Reduced calorie triglyceride mixtures

DATE-ISSUED: October 10, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wheeler; Edward L.	Fairfield	NJ	N/A	N/A
D'Amelia; Ronald P.	Hicksville	NY	N/A	N/A
Leveille; Gilbert A.	Denville	NJ	N/A	N/A
Otterburn; Michael S.	Randolph	NJ	N/A	N/A
Klemann; Lawrence P.	Somerville	NJ	N/A	N/A
Finley; John W.	Whippany	NJ	N/A	N/A
Roden; Allan D.	Nobelsville	IN	N/A	N/A
Chrysam; Michael M.	Blairstown	NJ	N/A	N/A
Pelloso; Turiddu A.	Carmel	IN	N/A	N/A
Given, Jr.; Peter S.	Glencoe	IL	N/A	N/A

US-CL-CURRENT: 426/660; 426/607, 426/804

Full | Title | Citation | Front | Review | Classification | Date | Reference KWIC | Draw Desc | Image

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☐ 15. Document ID: US 5445947 A

L14: Entry 15 of 22 File: USPT Aug 29, 1995

US-PAT-NO: 5445947
DOCUMENT-IDENTIFIER: US 5445947 A

TITLE: Jojoba wax biosynthesis gene

DATE-ISSUED: August 29, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Metz; James G.	Davis	CA	N/A	N/A
Lardizabal; Kathryn D.	Woodland	CA	N/A	N/A
Lassner; Michael W.	Davis	CA	N/A	N/A

US-CL-CURRENT: 435/69.1; 435/134, 435/419, 435/71.2, 536/23.2, 536/23.6

Full | Title | Citation | Front | Review | Classification | Date | Reference KWIC | Draw Desc | Image

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☐ 16. Document ID: US 5411756 A

L14: Entry 16 of 22 File: USPT May 2, 1995

US-PAT-NO: 5411756
DOCUMENT-IDENTIFIER: US 5411756 A

TITLE: Reduced calorie triglyceride mixtures

DATE-ISSUED: May 2, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wheeler; Edward L.	Fairfield	NJ	N/A	N/A
D'Amelia; Ronald P.	Hicksville	NY	N/A	N/A
Leveille; Gilbert A.	Denville	NJ	N/A	N/A
Otterburn; Michael S.	Randolph	NJ	N/A	N/A
Klemann; Lawrence P.	Somerville	NJ	N/A	N/A
Finley; John W.	Whippany	NJ	N/A	N/A
Roden; Allan D.	Nobelsville	IN	N/A	N/A
Chrysam; Michael M.	Blairstown	NJ	N/A	N/A
Pelloso; Turiddu A.	Carmel	IN	N/A	N/A
Given, Jr.; Peter S.	Glencoe	IL	N/A	N/A

US-CL-CURRENT: 426/607; 426/601, 426/804

Full | Title | Citation | Front | Review | Classification | Date | Reference KWIC | Draw Desc | Image

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☐ 17. Document ID: US 5378490 A

L14: Entry 17 of 22 File: USPT Jan 3, 1995

US-PAT-NO: 5378490
DOCUMENT-IDENTIFIER: US 5378490 A

TITLE: Reduced calorie triglyceride mixtures

DATE-ISSUED: January 3, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wheeler; Edward L.	Fairfield	NJ	N/A	N/A
D'Amelia; Ronald P.	Hicksville	NY	N/A	N/A
Leveille; Gilbert A.	Denville	NJ	N/A	N/A
Otterburn; Michael S.	Randolph	NJ	N/A	N/A
Klemann; Lawrence P.	Somerville	NJ	N/A	N/A
Finley; John W.	Whippany	NJ	N/A	N/A
Roden; Allan D.	Nobelsville	IN	N/A	N/A
Chrysam; Michael M.	Blairstown	NJ	N/A	N/A
Pelloso; Turiddu A.	Carmel	IN	N/A	N/A
Given, Jr.; Peter S.	Glencoe	IL	N/A	N/A

US-CL-CURRENT: 426/606; 426/607, 426/804

Full | Title | Citation | Front | Review | Classification | Date | Reference KWIC | Draw Desc | Image

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☐ 18. Document ID: US 5306516 A

L14: Entry 18 of 22 File: USPT Apr 26, 1994

US-PAT-NO: 5306516
DOCUMENT-IDENTIFIER: US 5306516 A

TITLE: Shortening compositions containing polyol fatty acid polyesters

DATE-ISSUED: April 26, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Letton; James C.	Forest Park	OH	N/A	N/A
Elsen; Joseph J.	Cincinnati	OH	N/A	N/A
Guffey; Timothy B.	West Chester	OH	N/A	N/A
Kester; Jeffrey K.	West Chester	OH	N/A	N/A
Weisgerber; David J.	Cincinnati	OH	N/A	N/A

US-CL-CURRENT: 426/531; 426/601, 426/804, 536/119

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 19. Document ID: US 5306515 A

L14: Entry 19 of 22 File: USPT Apr 26, 1994

US-PAT-NO: 5306515
DOCUMENT-IDENTIFIER: US 5306515 A

TITLE: Reduced calorie pourable shortening, cooking oils, salad oils or like compositions

DATE-ISSUED: April 26, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Letton; James C.	Forest Park	OH	N/A	N/A
Baginski; John R.	Loveland	OH	N/A	N/A
Elsen; Joseph J.	Cincinnati	OH	N/A	N/A
Guffey; Timothy B.	West Chester	OH	N/A	N/A
Hirshorn; James B.	Cincinnati	OH	N/A	N/A
Kester; Jeffrey J.	West Chester	OH	N/A	N/A
Weisgerber; David J.	Cincinnati	OH	N/A	N/A

US-CL-CURRENT: 426/531; 426/601, 426/804, 536/119

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 20. Document ID: US 5258197 A

L14: Entry 20 of 22 File: USPT Nov 2, 1993

US-PAT-NO: 5258197
DOCUMENT-IDENTIFIER: US 5258197 A

TITLE: Reduced calorie triglyceride mixtures

DATE-ISSUED: November 2, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wheeler; Edward L.	Fairfield	NJ	N/A	N/A
D'Amelia; Ronald P.	Hicksville	NY	N/A	N/A
Leveille; Gilbert A.	Denville	NJ	N/A	N/A
Otterburn; Michael S.	Randolph	NJ	N/A	N/A
Klemann; Lawrence P.	Somerville	NJ	N/A	N/A
Finley; John W.	Whippany	NJ	N/A	N/A
Roden; Allan D.	Nobelsville	IN	N/A	N/A
Chrysam; Michael M.	Blairstown	NJ	N/A	N/A
Pelloso; Turiddu A.	Carmel	IN	N/A	N/A
Given, Jr.; Peter S.	Glencoe	IL	N/A	N/A

US-CL-CURRENT: 426/607; 426/660, 426/804

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR		
L21	L1 same (PEG near (21 or 24 or 25 or 23 or 20) near stearate)	0	L21
L20	L1 same (PEG near stearate)	7	L20
L19	L1 same (PEG near stearate near 25)	0	L19
L18	L1 same (PEG near stearate near 20)	0	L18
L17	L1 and (etherified near fatty near acid near propoxylates)	0	L17
L16	L1 and (cholesterol near propoxylates)	0	L16
L15	L1 same (steareth near 20)	6	L15
L14	L13 and (steareth near 20)	77	L14
L13	L1 and emulsifiers	548	L13
L12	(polyoxypropylenated near fatty near alcohols) same (fatty near alcohol near ethoxylates)	0	L12
L11	(cetylstearyl near alcohol near ethylene oxide) same (fatty near alcohol near ethoxylates)	621	L11
L10	((cetylstearyl near alcohol) near ethylene oxide) same (fatty near alcohol near ethoxylates)	621	L10
L9	L8 same emulsifiers	64	L9
L8	((cetylstearyl near alcohol) same ethylene oxide) same (fatty near alcohol near ethoxylates)	621	L8
L7	l1 same (isosteareth near 12)	0	L7
L6	l1 same (isostearreth near 12)	0	L6
L5	L1 and (fatty near alcohol near ethoxylates)	41	L5
L4	L1 same (polyethylene near glycol near stearate near 24)	0	L4
L3	L1 same (ceteareth near 20)	18	L3
L2	L1 and (ceteareth near 20)	99	L2
L1	dihydroxyacetone	2554	L1

END OF SEARCH HISTORY

WEST

End of Result Set

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L53: Entry 5 of 5 File: USPT Jul 20, 1999

DOCUMENT-IDENTIFIER: US 5925679 A
TITLE: Topical vehicles containing solubilized and stabilized azelaic acid

ABPL:
A completely solubilized alcohol-free topical composition of azelaic acid in a glycol base which is stable at normal temperatures and which is useful as a commercial substitute for dispersed azelaic acid preparations. The composition has a pH of 4.0 or greater thereby substantially reducing irritation.

PCPR:
The present invention relates to topical compositions containing azelaic acid and glycol and more particularly to new and improved compositions containing stabilized and completely solubilized azelaic acid. This Application is a continuation of U.S. patent application Ser. No. 08/469,474, filed Jun. 6, 1995, now abandoned.

BSPR:
This invention relates to a completely solubilized topical formulation of azelaic acid which is stable at normal temperatures. Topical azelaic acid formulations have been used to a wide range of physiological maladies including acne, hyperpigmentary dermatoses, hair loss, wrinkling, hyperhidrosis, non-acne inflammatory dermatoses, infectious cutaneous and ichthyosis.

BSPR:
However, the only topical formulations of azelaic acid presently known are dispersions. Dispersions deliver azelaic acid in an undissolved state. When applied to the skin, undissolved azelaic acid is not readily absorbed and as a result an excess of azelaic acid must be present to be effective. The higher the concentration of azelaic acid, the more likely irritation (burning, stinging and redness) to the skin will occur.

BSPR:
What is needed is a completely solubilized topical azelaic acid composition. Solubilized azelaic acid is much less likely to irritate the skin because azelaic acid in a dissolved state is much more readily absorbed by the skin than in the undissolved states found in dispersions. Better absorption means less azelaic acid need be present in the formulation to be effective thereby lowering the risk of irritation to the skin.

BSPR:
While azelaic acid is somewhat soluble in water, cosmetic oils and alcohols, each of these solvents has serious limitations. Thus, water only marginally dissolves azelaic acid so that a water and azelaic acid solution would contain a maximum of about 0.24% by weight (w/w) azelaic acid, not likely enough to be effective. Azelaic acid has little or no solubility in cosmetic oils. Alcohols are good solvents but are unsatisfactory because large amounts of alcohol e.g., isopropyl alcohol, in a topical composition has the undesirable side effect of drying the skin. Indeed, some alcohols e.g., ethyl alcohol, render azelaic acid unstable at normal temperatures resulting in a totally ineffective composition.

BSPR:

U.S. Pat. Nos. 4,292,326 (Nazzaro-Porro, Sep. 29, 1981), 4,386,104 (Nazzaro-Porro, May 31, 1983), and 4,818,768 (Nazzaro-Porro, Apr. 4, 1989) describe azelaic acid as well as other dicarboxylic acids in the treatment of acne and melanocyclic hyperpigmentary dermatoses. The azelaic acid is dispersed in a cream base.

BSPR:
U.S. Pat. Nos. 4,713,394 (1Thornfeldt, Dec. 15, 1987) and 4,885,282 (Thornfeldt, Dec. 5, 1989) describe of azelaic acid as well as other dicarboxylic acids used in the treatment of nonacne inflammatory dermatoses and infectious cutaneous diseases such as rosacea, perioral dermatitis, eczema, seborrheic dermatitis, psoriasis, tinea cruris, flat warts, and alopecia areata. One of Thornfeldt's formulations comprises azelaic acid disposed in a large proportion of ethanol. While ethyl alcohol dissolves azelaic acid, it also renders the azelaic acid unstable at normal temperatures meaning that it will not provide a marketable product. Thornfeldt's second formulation comprises a complete dispersion of azelaic acid.

BSPR:
An emulsion containing 10-20% concentration of azelaic acid in a base of water, apple pectin and sunflower oil was taught by Berova, N., et al. in "Hypoallergic Cosmetic Emulsion with Azelaic Acid for Prophylaxy and Treatment of Acne Vulgaris," Berova, N., Nkiolova, A., Kratchanov, Chr., and Popova, M., Journal of Applied Cosmetology, vol. 12, no. 3, p. 51 (1994). Berova et al. attribute the mildness of their formulation to the use of natural ingredients like apple pectin and sunflower oil instead of non-natural substances in the azelaic acid vehicle. The emulsion taught by Berova et al. is not completely solubilized and suffers from the same problem as do the Nazzaro-Porro and Thornfeldt formulations, the weight percent of azelaic acid in the formulation is higher than needed because the azelaic acid is not completely solubilized.

BSPR:
Venkateswaran U.S. Pat. No. 5,549,888 teaches a solution of active ingredients which includes azelaic acid and is partially solubilized by a glycol. It uses glycol in combination with ethyl alcohol to solubilize the azelaic acid. As stated previously, the presence of ethyl alcohol with azelaic acid can destabilize the azelaic acid. Moreover, because the composition contains ethyl alcohol, formulation of a non-drying, aesthetically pleasing formulation would be difficult. Venkateswaran also teaches that the formulation has a pH between 2.5 and 4.0. This low pH range can have an irritating effect on the skin.

BSPR:
The art has yet to find a formulation for completely solubilizing azelaic acid at normal temperatures without sacrificing the stability of the solubilized azelaic acid. Solubilized azelaic acid must remain stable at normal temperatures in order to provide a marketable product.

BSPR:
Without a stable, completely solubilized formula of azelaic acid, the benefits of azelaic acid are unavailable to many users who experience the burning, stinging and redness of the skin associated with exposure to high levels of undissolved dispersed azelaic acid having an inherent low pH. The present invention provides a completely solubilized and stable formulation of azelaic acid in a glycol base at normal temperatures exhibiting a tolerable pH of 4 or greater and having a shelf life which enables a marketable product to be produced and reduces the amount of azelaic acid the user must be exposed to in order to enjoy its benefits.

BSPR:
The present invention relates to topical compositions of azelaic acid and more specifically to compositions containing stabilized and completely solubilized azelaic acid and glycol which can be used to treat a wide variety of skin conditions. The present invention delivers azelaic acid to the skin in a completely solubilized yet stable form at a tolerable pH, thus insuring excellent absorption by the skin and significantly reducing the incidence of

skin irritation.

BSPR:
Accordingly, a primary object of the invention is to provide a stable and completely solubilized formulation containing azelaic acid.

BSPR:
Another object is to provide lower, yet effective, concentrations of a topical azelaic acid formulation that is less likely to irritate the skin of the user.

BSPR:
A further object of the invention is to provide a stable, solubilized azelaic acid formulation that can be stored for long periods at normal temperatures and atmospheric pressures.

BSPR:
A still further object is to provide a completely solubilized and stabilized topical formulation containing azelaic acid that addresses a large variety of skin conditions.

BSPR:
The present invention relates to a topical cosmetic preparation containing azelaic acid stabilized and completely solubilized in a glycol base. The preparation is used to treat a wide variety of skin ailments with little or no irritation to the skin. The glycol easily and completely dissolves the azelaic acid without affecting the stability of the azelaic acid. The absence of ethanol or other destabilizing solvents insures the azelaic acid remains stable.

BSPR:
Azelaic acid, a straight chain dicarboxylic acid with 9 carbons, has limited solubility in water and commonly used cosmetic oils. However, lower levels of azelaic acid (from about 0.5% (w/w) to about 10% (w/w)) may be completely dissolved in glycol (from about 20% (w/w) to about 60% (w/w)) and remain in stable solution. The glycol utilized may be one or more of the following: propylene glycol, polypropylene glycol, dipropylene glycol, butylene glycol, polyethylene glycol, polyethylene glycol ethers, ethoxydiglycol, and the like. Moreover, if the azelaic acid is completely in solution, less azelaic acid is required for the treatment of the previously mentioned conditions. And unlike ethyl alcohol, the glycols maintain a stable solution at normal temperatures. Glycols also provide humectancy to the formulation, whereas ethyl alcohol or isopropanol have a drying effect.

BSPR:
Of course, other glycols which readily dissolve azelaic acid may be selected. The amount of glycol may vary from about 20% to 60% (w/w). 20% (w/w) glycol is the minimum amount required to solubilize an effective amount of azelaic acid. 60% (w/w) is probably the maximum level that could be used without completely sacrificing the formulation's aesthetics. Somewhere in the middle of this range is most ideal.

BSPR:
Although glycols are effective solubilizers for azelaic acid, the addition of water in a formulation can decrease the solubility of the azelaic acid. When preparing a formulation, a careful ratio between the water and glycols is employed to maintain the azelaic acid in solution even at refrigerated temperatures. The following Table 1 lists the various glycols and the maximum amount of water that can be used in the 1% azelaic acid formulations. The remaining balance of the formula may be other cosmetic ingredients that may include but are not limited to humectants (ie glycerin), emulsifiers, thickeners, opacifying agents, glycol/water compatible emollients. The other ingredients may be used if they do not negatively affect the solubility of the azelaic acid.

BSTL:
TABLE 1 _____ % Azelaic % Other Solvent (GLYCOL) Acid % Glycol % Water Ingredients
_____ Propylene Glycol 1.10 45 40 13.90 Dipropylene Glycol 1.10 30 45 23.90 Polypropylene 1.10 25 45 28.90 Glycol-9 Butylene Glycol 1.10 35 45 18.90 Polyethylene 1.10 35 40 23.90 Glycol-8 Polyethylene 1.10 30 40 28.90 Glycol-32 PEG-6 Methyl Ether 1.10 30 45 23.90 Ethoxydiglycol 1.10 25 50 23.90 Hexylene Glycol 1.10 20 45 33.90 PPG-2 Methyl Ether 1.10 30 45 27.90 _____

DEPR:
In one practice of the present invention, and our preferred embodiment thereof, a topical cream is produced by mixing about 20.0 to 60.0% (w/w) of ethoxydiglycol, about 3% (w/w) of diisopropyl adipate and about 1.0% to 10.0% (w/w) of azelaic acid until a clear solution is formed. In a separate container, q.s. distilled water and about 5.0% (w/w) of PEG-60 almond glycerides are mixed and heated to 70.degree. C. To this mixture, about 8% (w/w) of glycol distearate is added and all three ingredients are mixed while maintaining a temperature of 70.degree. C. until the whole forms a white homogeneous fluid. This mixture was allowed to cool to 40.degree. C. to which the azelaic acid-ethoxydiglycol-diisopropyl adipate mixture is added. About 2.5% (w/w) of a mixture of polyacrylamide, C13-C14 isoparaffin and Laureth 7, (which mixture is available as SEPIGEL 305 from Seppic Department Cosmetique-Pharacie, Paris, France), is then added and the whole was mixed until a thick and homogeneous cream resulted.

DEPR:
In another preferred practice of the present invention, a topical cream is produced by mixing about 1.0% to 10.0% (w/w) of azelaic acid with about 20.0% to 60.0% (w/w) of dipropylene glycol and heating the mixture to about 60.degree. C. until a clear solution is formed. The solution is then cooled to and maintained at 40.degree. C. In a separate container, about 5.0% (w/w) PEG-60 almond glycerides and q.s. distilled water are mixed and heated to about 70.degree. C. To this mixture, about 8.0% (w/w) of glycol distearate is added and all three ingredients are mixed while maintaining a temperature of 70.degree. C. until the whole forms a white homogeneous fluid. This mixture is then allowed to cool to 40.degree. C. and the azelaic acid-dipropylene glycol mixture is added thereto and mixed therein. About 2.0% (w/w) of a mixture of polyacrylamide, C13-C14 isoparaffin and Laureth 7 (SEPIGEL 305) is then added and the whole mixed until a thick and homogeneous cream results.

DEPR:
These ingredients serve dual functions: first is to assist in dispersion of other ingredients like the glycol distearate and second is to enhance penetration of the azelaic acid. The emulsifier needs to have a hydrophilic/lipophilic balance (HLB)>13 for these purposes in the amount of 2-10%.

DEPR:
From the foregoing, it is apparent that novel and unique topical vehicles containing solubilized and stabilized azelaic acid have been herein described and illustrated which fulfills all of the aforestated objectives in a remarkably unexpected fashion. It is, of course understood that such modifications, variations or adaptations as may readily occur to an artisan familiar with the art to which this invention pertains are intended within the spirit of this invention which is limited only by the scope of the claims appended hereto.

DEPL:
Other glycols, such as dipropylene glycol, can be similarly used to solubilize the azelaic acid as in the following Formula 4.

DETL:
_____ FORMULA 3 Material % by weight
_____ Ethoxydiglycol 41.5 Azelaic Acid 1.1

Diisopropyl Adipate 3.0 PEG-60 Almond Glycerides 5.0 Glycol Distearate 8.0 SEPIGEL 305 2.5 Distilled Water to 100%

DETL:

FORMULA 4 Material % by weight Dipropylene Glycol 43.75 Azelaic Acid 1.10 PEG-60 Almond Glycerides 5.00 Glycol Distearate 8.00 SEPIGEL 305 2.00 Distilled Water to 100%

DETL:

FORMULA 5 Material % by weight Butylene Glycol 27.5 PEG-32 20.0 Azelaic Acid 1.1 Polysorbate 20 4.0 Glycol Distearate 7.5 Glycerin 5.0 SEPIGEL 305 1.5 Distilled Water to 100%

CLPR:
1. A topical composition comprising completely solubilized azelaic acid in a glycol base wherein said solubilized azelaic acid is stable at normal temperatures and exhibits a pH of 4.0 or greater; said composition containing from about 0.5% to about 10% (w/w) of said azelaic acid, from about 20.0% to about 60.0% (w/w) of a glycol base, and from about 20.0% to about 60.0% (w/w) distilled water said glycol base being selected from the group consisting of propylene glycol, polypropylene glycol, dipropylene glycol, butylene glycol, polyethylene glycol, polyethylene glycol ethers, polyproprylene glycol ethers, hexylene glycol, and ethoxydiglycol.

CLPR:
2. A topical composition comprising completely solubilized azelaic acid in a glycol base wherein said solubilized azelaic acid is stable at normal temperatures and exhibits a pH of 4.0 or greater; said composition containing from about 0.5% to about 10% (w/w) of said azelaic acid, from about 20.0% to about 60% (w/w) of a glycol base, and from about 20.0% to about 60.0% (w/w) distilled water; said composition further comprising about 20% to about 60% ethoxydiglycol, about 3.0% (w/w) of diisopropyl adipate, about 5.0% (w/w) of PEG-60 almond glycerides, about 8.0% (w/w) of glycol distearate, about 2.5% (w/w) of a mixture of polyacrylamide, C13-C14 isoparaffin and Laureth 7 and q.s. distilled water.

CLPR:
3. The composition according to claim 2 comprising from about 1% to about 10% (w/w) of said azelaic acid.

CLPR:
5. A topical composition according to claim 2 containing from about 20% up to about 35% (w/w) of a glycol base.

CLPR:
6. A topical composition comprising completely solubilized azelaic acid in a glycol base wherein said solubilized azelaic acid is stable at normal temperatures and exhibits a pH of 4.0 or greater; said composition containing from about 0.5% to about 10% (w/w) of said azelaic acid, from about 20.0% to about 60.0% (w/w) of a glycol base, and from about 20.0% to about 60.0% (w/w) distilled water, said composition further comprising about 20% to about 60% (w/w) dipropylene glycol, about 5.0% (w/w) of PEG-60 almond glycerides, about 8.0% (w/w) of glycol distearate, about 2.0% (w/w) of a mixture of polyacrylamide, C13-C14 isoparaffin and Laureth 7 and q.s. distilled water.

CLPR:
7. The composition according to claim 6 comprising from about 1% to about 10% (w/w) of said azelaic acid.

CLPR:
9. A topical composition according to claim 6 containing from about 30% up to about 50% (w/w) of a glycol base.